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DEPARTMENT OF
PLANNING & ZONING

MEMORANDUM

To: Mary O'Neil, Senior Planner
City of Burlington, Department of Planning and Zoning

From: Gail Henderson-King *gk*

Date: August 28, 2014

Re: Fletcher Allen Health Care Inpatient Building – Final Site Plan Application
Additional Materials for the Development Review Board (DRB)

On behalf of Fletcher Allen Health Care, enclosed please find the following additional materials for the DRB regarding the Final Site Plan Application plan for the proposed Inpatient Building at 111 Colchester Avenue in Burlington:

1. 1 copy of the U2 Rack brochure: bike rack cut sheet. This is the bike rack that will be used on the project site.
2. 1 copy of the Memorandum from Gail Henderson-King dated August 28, 2014 regarding parking space sizes.
3. 1 copy of the Memorandum from Gail Henderson-King dated August 28, 2014 regarding updated lighting plan changes.
4. 1 full size and one 11" x 17" copy of the following updated lighting plans:
 - Sheet LI-1.0 Lighting Plan Inpatient Building Project
 - Sheet LI-1.1 Lighting Plan UVM Parking Reconfiguration
 - Sheet A6-2 Inpatient Building First Floor Reflected Ceiling Plan
5. 1 copy of updated lighting cut sheets. These sheets now correspond to the labeling on the lighting plans.

Please feel free to contact me if you have questions or need additional information.

40 College St., Suite 100 / PO Box 1007 / Burlington, VT 05402-1007 P: 802.862.1225 F: 802.862.3601

www.whiteandburke.com

Cycle-Safe Maintenance-Free U/2 Bike Racks



Cycle-Safe U/2 Racks Are The Standard:

Cycle-Safe bicycle racks are designed to provide safety for users and to fit into any urban environment. The Cycle-Safe engineering team has developed three variations for installation to accommodate your needs: In-ground, Surface-Mount, or Rail-Mount.

How to Specify Bike Racks

Bicycle rack part #(12700), as manufactured by Cycle-Safe, Inc.

- 1-1/2" SCHD. 40 PIPE (1.50" I. D.), rolled in the shape of an inverted "U" to a 24" outside radius of standing 36" high.
- Coating to be plastisol rubberized applying 12-20 mils thick jacket.
- Standard Color-Black
- Texture-regular grain
- Gloss-semi-gloss (optional textured)
- Tensile Strength-1800 PSI min.
- Resistance to abrasion
- Salt Spray Resistance to >2000 hours
- Hardness (Shore D) ASTM D 2240 – Results 52
- Installation Options: In-ground (G), Surface-Mount (S), Rail-Mount (R)

Visit our Web site for information and images....
www.cyclesafe.com

Download complete specifications for each rack in Word format.



Cycle-Safe also manufactures bike lockers and a wide range of bicycle locker accessories.

Please call or visit our web site for details. www.cyclesafe.com

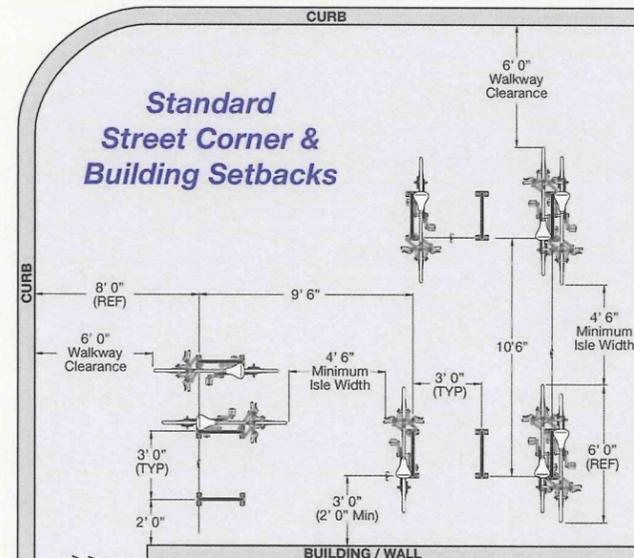
© 2007 cycle-safe®, Inc., cyclemanager®, Cycle-Safe® and ProPark® are registered trademarks.



Installation Layouts & Space Requirements:

Based on recommendations from the Association of Pedestrian and Bicycle Professionals and over 26 years in the bike parking industry, the following diagrams show typical configurations and space allowances for installations of multiple bike racks.

The minimum space between each rack is 3'0", more if possible to allow for ease of access. Aisles separate the rows of racks, with a minimum between aisles to be 4'-6", to allow for one person to walk one bike. In high traffic areas, the recommended aisle width is 6'-0". Aisle widths are measured tip to tip of bike tires between the rows of racks. Six feet should be allowed for each row of parked bicycles. Conventional upright bicycles are just less than 72 inches long, with handlebar widths varying from 22"-27" and can be easily accommodated with these recommended spacings.



info@cyclesafe.com
www.cyclesafe.com
 TF (888) 950-6531
 P (888) 954-9977
 F (616) 954-0290

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Cycle-Safe[®]
 SECURE BICYCLE PARKING

Cycle-Safe Maintenance-Free U/2 Bike Racks



U2 RACK
 by: cycle-safe

Durable and Maintenance-Free

Cycle-Safe® inverted U/2 bicycle racks provide leading edge technology and offer the best solution for short-term bicycle parking. The one-bend bike rack design accommodates two bicycles per rack and is widely regarded as the recommended standard for space efficiency and bicycle protection. Cycle-Safe bike racks are completely coated with a thick, rubberized plastisol coating over schedule 40 steel pipe for maximum corrosion resistance, impact resistance, and protection of bicycle finish. This combination has proven to resist scratches and dents better than any other finish.



Superior Design for Better Safety

Cycle-Safe U/2 racks provide lean to support with more stability for the bicycle frame than front wheel holders or ribbon type racks which do not support the bike frame in two places. The clean lines of the One-Bend inverted-U rack design are safer for pedestrian traffic with bikes parked securely in a uniform fashion. U/2 racks accommodate more bicycles per square foot to increase bike parking capacity. Bicycle racks are typically installed directly into a slab which results in additional strength and permanence to bolster user confidence. Bicycle frame should be secured to the rack with a standard U lock for optimal security.



Aesthetically Pleasing

The Cycle-Safe U/2 rack is symmetrically designed to resemble the commonly used "U" locks and are aesthetically pleasing to blend with any environment. All racks leave the bicycle vulnerable to theft of components and vandalism, bike lockers are the preferred choice for protection and security. Coating of metal racks vary widely, the best long term solution is a thick jacketed plastisol coating as provided by Cycle-Safe. Our standard U/2 rack finish is a black plastisol coating, polyester powder coat finishes are available in a variety of custom colors. Cycle Safe offers the best finishes that maintain quality that an owner can depend on for years.

In-ground Installation

Model	M U/2 In Ground	U/2 W/Cross Bar
U/2	12700G	12700GB

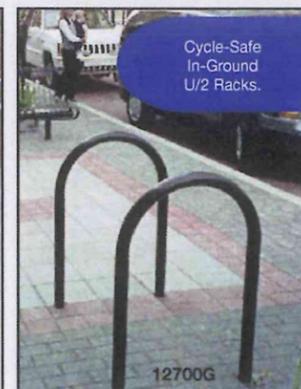
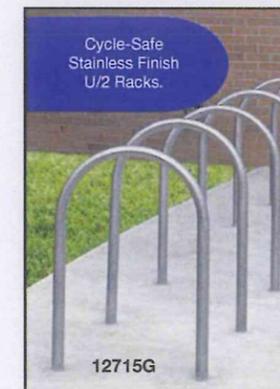
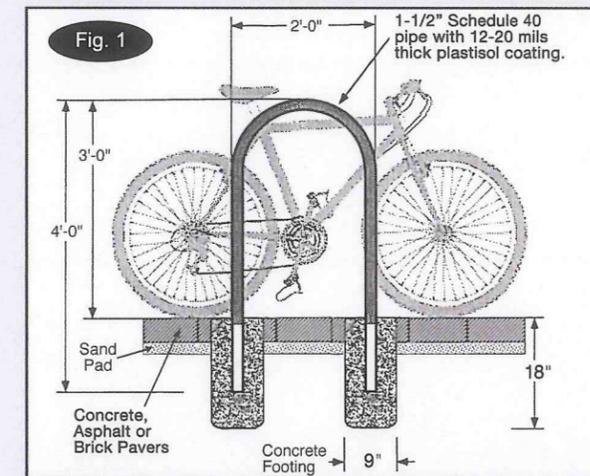
Inverted U/2 Rack, IN-GROUND / 2 Bicycle Capacity

Recommended installation methods for in-ground style rack: If installing on existing concrete, Cycle-Safe® U/2 Bike Racks can be anchored with a non-shrink grout poured into a 4" or 6" diameter by 12" deep core drilled holes. In-ground installations for new improved surfaces 9" Sonotube forms can be put in place to create 18" footings. U/2 inverted-U racks come in optional square pipe or in two-bend configurations.

Download Specifications & Images at
www.cyclesafe.com

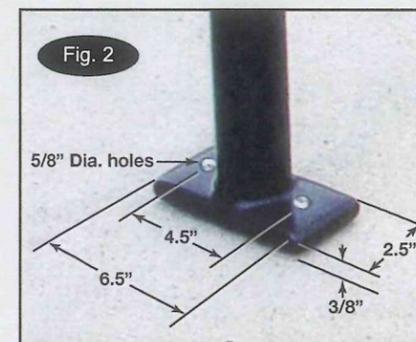
In-ground Installation

This is the standard for new construction and the most secure type of inverted-U installation. Existing concrete surface may be core drilled with a 3"-4" hole saw and filled with quikcrete or a construction adhesive.



Surface Mount Installation

Model	U/2 In Ground	U/2 W/Cross Bar
U/2	12700S	12700SB



Inverted U/2 Rack, SURFACE-MOUNT / 2 Bicycle Capacity

Recommended Installation:

Cycle-Safe Surface mount U/2 Bike Racks can be anchored with tamper resistant concrete anchor screws and a Dropin anchor system (figure 3). All inverted-U racks come with optional square pipe.



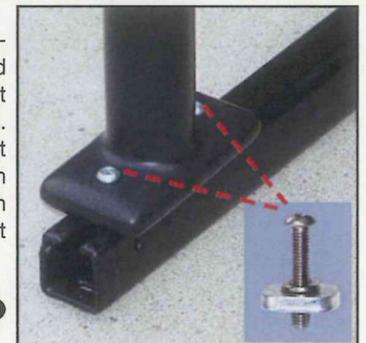
Rail-Mount Installation

Model	Six foot C-Rails
U/2 Rail	12700SR

NOTE: The Rails and Surface-Mount (12700S) inverted-U racks are included.

Inverted U/2 Rack, RAIL-MOUNT / 2 Bicycle Capacity

The Cycle-Safe Rail-Mount inverted-U modular design can be placed in areas where permanent anchoring is not desired. Simply use the 6 foot C-rail and place racks on top, securing with supplied tamper resistant hardware.



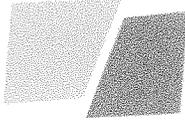
Rail-Mount Inverted-U:



The Rail-Mount inverted-U option creates a portable rack system. It can be placed at any location and moved for cleaning snow or debris. This versatile rack can be furnished with additional rails to create longer rows. Rails can be anchored with tamper resistant concrete anchor systems.

The Rail-Mount option can be used with standard one-bend, Vintage Rack styles, two-bend or optional square pipe models.

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To: Mary O’Neil, Senior Planner
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From: Gail Henderson-King *ghk*

Date: August 28, 2014

Re: Fletcher Allen Health Care Inpatient Building – Final Site Plan Application
 Previous Approval of Parking Space Size

I. Overview

The Staff Report dated July 22, 2014 for the Design Advisory Board brought up the concern that the proposed parking space sizes are not in conformance with the Zoning Regulations. The following paragraph is from this Staff Report:

Parking spaces are defined as 18’ in length, which do not meet the requirement for standard parking spaces in Table 8.1.11-1. (Plan C-104.) This standard, for spaces at a 90° angle, have a requirement of 20’ in length. The required 24’ in backup space is met in the plan. Article 8 does allow for compact parking spaces (18’ in length), but Sec. 8.1.12 (h) is not implicit about limitation. Compact parking spaces may be used in parking structures or lots. Up to 15% of the total parking spaces in a parking garage may be designated for compact cars. As this is not a parking structure but a lot, the 15% does not apply. This particular standard of Article 6, however, requires that parking spaces meet the requirements as provided in Article 8; which is 20’.

Upon reviewing the previous approvals for the Fletcher Allen Health Care Medical Center campus and the Joint Institutional Parking Management Plan, we are providing the following information regarding campus parking space sizes.

I. Previous City Approval

The proposed parking space sizes for the Inpatient Building parking areas are based on the



existing parking space sizes. These parking spaces were approved as part of the Renaissance Project.

A Zoning Permit for one of the phases of the Renaissance Project, which included the Ambulatory Care Center and associated parking areas for the Emergency Department, was issued on November 9, 2001. The approved plan set for this Zoning Permit was submitted on October 30, 2001 and contained architectural, civil engineering, and landscape plans and detail sheets. It included Sheet C2.7 Civil/Site II Site Layout Plan dated August 24, 2001, which includes a detailed redesign of the Emergency Department / Converse parking lot.

On Sheet C2.7, the parking spaces dimensions are labeled. The perpendicular parking spaces are labeled: 8.5' width by 18' depth typical. The angled parking spaces are also labeled an 18' depth. The angled parking doesn't have a typical width labeled as they vary based on the angle used. The sizes of the parking spaces was based on extensive review with UVM, Fletcher Allen and CATMA in an effort to reduce the amount of paved parking areas on the respective campuses. A memorandum to Ken Lerner from David G. White dated October 31, 2001 was accompanied by a plan set that included Sheet C2.7 dated August 24, 2001. See Attachment A: Sheet C2.7.

In addition, the *2014-2019 Update of the Joint Institutional Parking Management Plan* that includes parking management strategies that involve the Fletcher Allen, UVM and Champlain College campuses "...Recognizes the need to manage parking demand and resources holistically and creatively, employing demand management practices as well as supplying adequate parking facilities...". In an effort to manage parking resources creatively, the reduction of the parking space size is one such endeavor employed by Fletcher Allen and UVM.

II. Parking Size Industry Standards

Over the past several decades, the size of cars has increasingly reducing in length and width. A study done in 1982 that was published in the Institute of Transportation Engineers (ITE) Journal in April 1984 shows the average number of compact cars available for sale in the US was 70% compared to 30% full size. See Attachment B: Parking Layout Dimension Guidelines article.

Based on current trends, the number of compact cars available in the US is probably even higher. The result of this trend has been the design of parking lot spaces has changed. The typical layout used in the industry today reflects the following dimensions: a lot with two parking bays (8.5' to 9' width x 18' depth) and a two way aisle in between (24' width), which totals an overall dimension of 60'. This allows for more turning area in the two way aisle with needed parking bay space.

In addition, the Americans with Disabilities Act (ADA) requires that accessible parking spaces be at least 96" or 8' wide, which also supports the smaller size space.

III. Request for Using Smaller Parking Space Size

In an effort to keep surface parking areas to a minimal size, we request the DRB allow Fletcher Allen and UVM to use the same parking space size that was approved for the existing parking lots in November 2001 as part of the Renaissance Project: 8.5' width x 18' depth with a 24' two way aisle.

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Parking Layout Dimension Guidelines

By Paul C. Box
and Neil S. Kenig

Background

In December 1970, the Federal Highway Administration and Paul C. Box and Associates conducted a special study to evaluate the effects of varied aisle and stall widths at different parking angles. The work included laying out various combinations and positioning vehicles so that they represented a Full Size car centered in adjacent stalls. Another Full Size car was then parked and unparked by a variety of different drivers. The parking difficulties were noted, operations timed, and a ranking sheet utilized. The results of these studies were published as Table 6.1 in *Parking Principles*.¹

In the last 12 years, there has, of course, been a change in the average size of motor vehicles on the road. The need for separate dimensions for smaller vehicles was identified in *Parking Principles* where Table 6.2 gave layout

Table 1. Vehicle Parking Maneuvers—65° Angle Parking

Stall Width	Compact No. of Maneuvers			Intermediate No. of Maneuvers			Full Size No. of Maneuvers		
	1	2	3+	1	2	3+	1	2	3+
9'-0''	97%	2%	1%	96%	4%	—	95%	3%	2%
8'-6''	98%	2%	—	95%	3%	2%	92%	4%	4%
8'-3''	97%	3%	—	95%	4%	1%	93%	4%	3%
8'-0''	98%	1%	1%	93%	5%	2%	90%	6%	4%

Note. The minimum parking maneuver was one and the maximum observed was four. Three maneuvers represent 85% of the 3+ group. The unparking maneuvers required fewer numbers.

Source: Ref. No. 2.

dimensions for 15-foot long "foreign"-size vehicles. The table had a note that the stall depth should be increased one foot to accommodate the usual range of American Compact vehicles (at that time).

Today, we are faced with the dilemma

of whether to seek a "uniform" stall size to simplify the problem faced by governmental agencies in setting parking stall requirements and simplify the task of consultants in designing parking lots for private developers. Unfortunately, a uniform stall size could be larger than

necessary for a substantial proportion of the parking mix, and would be cramped and possibly increase accidents as well as congestion with respect to larger vehicles in the mix.

Some authorities have extrapolated a continuing downward trend in vehicle sizes and assumed that in the foreseeable future there would be no more vehicles of the "large" size. However, this may be an erroneous assumption. First, a major sales point for auto manufacturers over many decades has concerned "roominess." Assuming that (1) the average dimensions of the human body are not going to change, (2) a limit has about been reached on how tightly the engine and associated components can be packed under the hood, and (3) trunk space is also approaching (or is beyond) a practical minimum, then a substantial number of "large" size cars are likely to continue to be manufactured.

Barton-Aschman Guidelines

Recently, several studies have been made of the current vehicle mix by Barton-Aschman Associates, Inc.^{2,3,4} These studies included surveys of existing office and retail developments to identify the current vehicle mix at each type of development. They identified the trends in the manufacture of automobiles between 1975 and 1982. Studies were also conducted in Canada and the United States at shopping centers to observe customer vehicle parking and unparking maneuvers. The results of selected studies are shown in Tables 1 and 2.

These dimensions show a change of about one foot in overall length and about 0.2 feet in width of Full Size cars. No significant change appears in the Compact group.

A 1981 study by Barton-Aschman at several suburban office developments in the Chicago area of some 3,800 vehicles produced the following results:

Compact Cars
(15 feet maximum length) = 49%

Intermediate and
Full Size Cars = 51%

Based on these studies and current trends, Barton-Aschman has recommended parking stall dimensions as indicated in Table 3. The average dimensions for the various angles and stall widths shown are tighter than those utilized in most existing parking facilities or currently specified in local zoning ordinances. However, Barton-Aschman

Table 2. Trends in Automobile Sizes^a

Year and Vehicle Type	No. of Models	Length		Width	
		Average	Maximum	Average	Maximum
1975					
Compact	28 (41%)	14.5	16.3	5.5	6.4
Full Size	41 (59%)	18.1	19.5	6.4	6.7
Average		16.6		6.0	
1980					
Compact	57 (59%)	14.5	16.3	5.5	5.9
Full Size	39 (41%)	17.4	18.5	6.2	6.5
Average		15.7		5.8	
1981					
Compact	59 (63%)	14.5	16.3	5.5	5.9
Full Size	35 (37%)	17.4	18.5	6.2	6.5
Average		15.6		5.8	
1982					
Compact	70 (70%)	14.6	16.3	5.5	6.1
Full Size	30 (30%)	17.3	18.4	6.2	6.5
Average		15.4		5.7	

^aAvailable for sale in the United States.

Table 3. Barton-Aschman Parking Guidelines (All Dimensions in Feet)

	Stall Width Parallel to Aisle	Stall Depth to Wall	Stall Depth to Interlock	Aisle Width	Modules	
					Wall to Wall	Interlock to Interlock
Full Size Stalls^a						
45 Degrees						
8.0 stall	11.3	16.6	14.5	13.0	46.5	42.0
8.5 stall	12.0	16.6	14.5	12.0	45.5	41.0
60 Degrees						
8.0 stall	9.2	18.2	16.7	17.0	53.5	50.5
8.5 stall	9.8	18.2	16.7	16.0	52.5	49.5
75 Degrees						
8.0 stall	8.3	18.5	17.7	21.0	58.0	56.5
8.5 stall	8.8	18.5	17.7	20.0	57.0	55.5
90 Degrees						
8.0 stall	8.0	17.5	17.5	25.0	60.0	60.0
8.5 stall	8.5	17.5	17.5	23.0	58.0	58.0
Compact Size Stalls						
45 Degrees						
7.5 stall	10.6	14.5	12.5	12.0	41.0	37.0
8.0 stall	11.3	14.5	12.5	11.0	40.0	36.0
60 Degrees						
7.5 stall	8.7	15.8	14.4	15.0	46.5	44.0
8.0 stall	9.2	15.8	14.4	14.0	45.5	43.0
75 Degrees						
7.5 stall	7.8	16.0	15.2	18.0	50.0	48.5
8.0 stall	8.3	16.0	15.2	17.0	49.0	47.5
90 Degrees						
7.5 stall	7.5	15.0	15.0	20.0	51.0	50.0
8.0 stall	8.0	15.0	15.0	19.0	50.0	49.0

^aStalls are based on 17.5-foot length car.

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feels that these guidelines will provide satisfactory parking accommodation for most of the users. Use of the 8.5-foot stall is proposed for high turnover applications such as convenience grocery stores.

Paul C. Box Guidelines

Another much smaller study was performed in 1983 by Paul C. Box and Associates, Inc. They measured the size of approximately 230 vehicles in the parking lot of a general office building in Skokie, Illinois. Measurements were separately taken of vehicles parked in the executive portion of the lot. The findings were:

Parking Area	Average Vehicle Length (feet)	Vehicle Width (feet)
Executive	16.0	6.0
General	15.4	6.0
Overall average	15.6	6.0

The 90 percentile value of length and width were calculated from the data. These figures are: 18.2 foot length and 6.4 foot width.

These dimensions are slightly greater than those found by Barton-Aschman Associates. Box measured overall lengths including bumper guards and widths including protruding side mirrors. The latter ordinarily do not affect door opening clearance (except at low parking angles), but they may affect the swept path into a parking stall.

From these data plus extrapolations of prior studies, a table of suggested parking dimensions for both Full Size and Compact Size cars has been developed. These guidelines are shown in Table 4, and are based upon an 8.5 foot wide x 18.0 foot long stall for Full Size stalls (except high turnover). For Compact Size vehicles, the proposed stall size of 8.0 foot wide x 16.0 foot long will accommodate 52% of the cars measured in the study.

Use of the 9.0 foot wide stall is suggested only for very high turnover applications such as convenience grocery stores.

Comparisons

Comparison of tables for the Barton-

Table 4. Paul Box Parking Guidelines (All Dimensions in Feet)^a

	Stall Width Parallel to Aisle	Stall Depth to Wall ^b	Stall Depth to Interlock	Aisle ^c Width	Modules ^d	
					Wall to Wall ^b	Interlock to Interlock
Full Size Stalls						
45 degrees						
8.5 stall	12.0	17.0	15.0	13.0	47.0	43.0
9.0 stall	12.7	17.0	15.0	12.0	46.0	42.0
60 degrees						
8.5 stall	9.8	18.5	17.0	17.0	55.0	52.0
9.0 stall	10.4	18.5	17.0	16.0	54.0	51.0
75 degrees						
8.5 stall	8.8	19.0	18.0	23.0	61.0	59.0
9.0 stall	9.3	19.0	18.0	22.0	60.0	58.0
90 degrees						
8.5 stall	8.5	18.0	18.0	26.0	62.0	62.0
9.0 stall	9.0	18.0	18.0	25.0	61.0	61.0
Compact Size Stalls						
45 degrees						
8.0 stall	11.3	15.5	13.5	13.0	44.0	40.0
60 degrees						
8.0 stall	9.2	16.8	15.3	14.0	48.0	45.0
75 degrees						
8.0 stall	8.3	17.0	16.3	17.0	51.0	50.0
90 degrees						
8.0 stall	8.0	16.0	16.0	20.0	52.0	52.0

^aFor Full Size 18-foot length car, or Compact Size 16-foot length car, measured parallel to vehicle.

^bFor bumper overhang of 6-inch curb, deduct 1.5 feet from Stall Depth to Wall, or 3.0 feet from Wall to Wall module if curb on both sides, for 45 and 60 degree parking. The equivalent dimensions for 75 and 90 degree angles are 2.0 and 4.0 feet, respectively.

^cMeasured between ends of stall lines limited by vehicle bumper positions.

^dRounded to nearest foot.

Aschman versus Box guidelines tends to illustrate philosophical differences. The smaller parking dimensions emphasize the most economic use of space with user convenience given lesser importance. The more generous dimensions consider user convenience slightly ahead of economics. Obviously, both are important. The Barton-Aschman dimensions for a Full Size layout at 90 degrees (8.0 foot nominal stall width) calculates to 240 square feet per stall (including maneuver access aisle, but excluding crossover aisles, landscaping, and driveways). The Box dimensions for the 8.5 foot nominal stall width calculate to 264 square feet for similar conditions; an increase of 10%.

It is recommended that public agencies and designers preparing parking

layouts consider their own priorities in determining which values to use. If a parking lot construction cost of \$4.00 per square foot is assumed (to include excavation, pavement, drainage, marking, lighting, and other miscellaneous elements), the cost utilizing the Box dimensions would be about \$100 more per stall than for the Barton-Aschman figures. For a concrete parking garage, the added per-stall cost would be about \$400. Similarly, for whatever land cost is assumed, an increase of an equal percentage would be expected, if utilizing the Box dimensions instead of those of Barton-Aschman.

Of course, in making any such comparisons, it should be recognized that relatively minor differences in efficiency of parking layouts and/or sizes or

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shapes of particular land parcels can easily equal or exceed the above variations based on idealized parking layout.

Handling the Compact versus Full Size Vehicle Mix

The dimensional requirements for adequate parking layout vary substantially between Compact and Full Size. The stall area (again assuming 90 degree layout) is about 25% greater for the Full Size parking layout. Because we have an existing condition where about 50% of the vehicles can be accommodated in the Compact Size layout, it is prudent to consider provision of separately marked stalls for both vehicle sizes. There are numerous problems related to this. How, for example, is the Compact car driver prevented or discouraged from parking in a Full Size stall? If the facility is a commercial pay-type (utilizing either parking meters or some other fee collection method) and the Compact stall parking is cheaper (as it certainly should be, because less space is required), then the economic incentive could be a partial answer to the problem. However, most off-street parking spaces are free. Under these conditions, an element of convenience is needed to assure appropriate usage. It would appear that the most practical way of doing this is to place the Compact stalls closest to the building access doors.

For practical reasons, the driver of a Full Size car is less likely to attempt parking in a Compact stall than the converse condition. Such an arrangement represents a slight social discrimination against the larger car driver. There appears to be no fully satisfactory solution to this problem.

In large parking areas, an alternating mix has sometimes been employed. For example, the San Diego Zoo uses alternating parking modules of Full Size and Compact. This has the effect of equalizing walking distance to the entrance gates, since the aisles are generally oriented toward the gates. In designing a commuter parking lot recently, Box utilized Compact parking in a separate area of the lot, generally closest to the railroad station. The most convenient spaces utilized for pickup of passengers during the evening train arrivals were of course located closest of all to the station. Incidentally, these P/D (pickup/dropoff) stalls are used during the mid-

day period by shorter term parkers (leaving on trains after the morning rush and returning prior to the evening rush). This design concept, as recommended in *Parking Principles*, has been successfully utilized before.

In a large office or industrial parking facility, the setting aside of separate spaces for Compact vehicles is practical. This assumes that walking distance to the access doors of the building would be no greater, or even slightly less, for the Compact car drivers. Alternatively, some kind of regulatory enforcement of proper parking would be needed.

In shopping centers, the problem of setting aside Compact stalls for customer use is more difficult. Current research is underway to determine the practicality of this application.⁵ In the interim, use of alternating rows might be tried with a 90 degree parking layout. With an angle layout, such as 60 degrees, it might be necessary to use double alternates; i.e., two modules of Compact, then two modules of Full Size (an "in" plus an "out" aisle of each).

A significant problem in the assignment of vehicles arbitrarily to Compact or Full Size areas concerns *definitions*. For some time, the dimensional separations have become blurred. Most people do not know the length of their vehicles and signs reading "Vehicles 15 Feet or Shorter—Use This Area" would hardly be definitive to the average driver. Perhaps there is no answer to this problem and it is a matter more of driver trial and error than anything else. The concept is too new to determine how well drivers will adapt to signing such as "Compact Car Parking Only." One suggestion is to paint a line at the rear of the Compact stall as an indication to the parker that their car is "oversize."

End Islands

A very common error in parking facility design involves excessive length of islands when placed at ends of parking rows. These islands can serve several useful purposes, if properly designed:¹

1. Limit parking encroachment into cross aisles.
2. Open up sight distance at intersection of cross aisles with access aisles.
3. Provide a comfortable turning radius.
4. Provide a cart storage area at supermarkets.
5. Store limited quantities of snow.

6. Protect directional signs and allow light pole locations.
7. Allow esthetic plantings to avoid a "sea of paving" appearance.

Obviously, several of these purposes requires a raised, curbed island to be effective.

Figure 1 illustrates good, basic designs for 90 degree and 60 degree parking angles. It is important that the length be less than the stall depth, in order to allow for proper turning of vehicles to and from the cross aisle. With 90 degree parking this is particularly important. If the island length extends to the end of the stall, then one vehicle entering or leaving the parking aisle will temporarily block another vehicle next to the island.

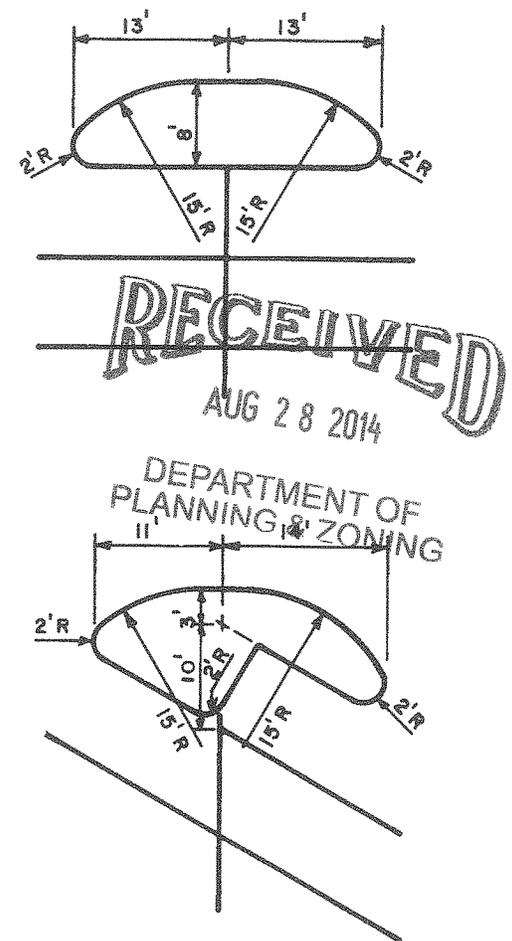


Figure 1. End-island examples.

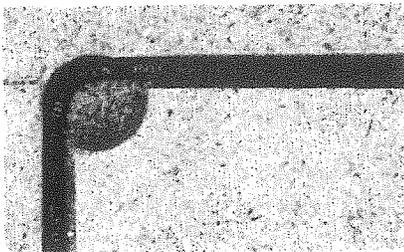
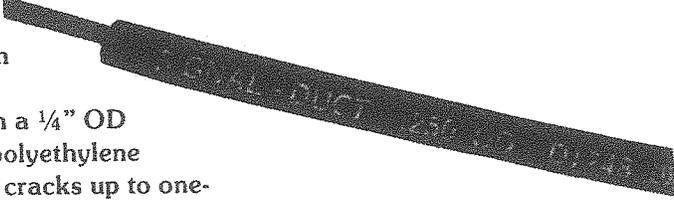
References

1. "Parking Principles," Special Report No. 125, Highway Research Board, Washington, D.C., 1971.
2. O'Hara, D., G. Lindgren, and R. Hocking, "Major Trends Affecting Planning and Design for Parking," presented at ITE Annual Meeting, August 1982.

Signal Duct[®] protects signal loops from shearing stress caused by pavement expansion, contraction and heaving; cracks and potholes.

Here's how:

Integral's unique Signal Duct System uses conventional loopwire encased in a 1/4" OD flexible, annealed polyethylene conduit. Pavement cracks up to one-inch in width have not caused loop failures where loop wire has been protected by tubing.*



Installation is easy.

Signal Duct will bend to a minimum radius of 1" or larger, if desired. There is no adhesion between the loopwire and the conduit; the conduit's inner surface is very smooth and signal wire moves freely within the duct.

Signal Duct is available now.

Integral's Signal Duct conduit is formed by continually extruding it as a tube or duct over the traffic signal loopwire; it is normally put up on reels of 2500 or 5000 feet to facilitate handling and to virtually eliminate splicing. Other lengths are available. Signal Duct is normally furnished with Type THHN or XHHW signal wire. The Signal Duct or loopwire can be color-coded.

* For case history and product information, call (214) 826-0590 or send coupon to Signal Duct: Integral Corporation, P.O. Box 11269, Dallas, Texas 75223.

Please send me information on Signal Duct.

Name _____

Unit _____

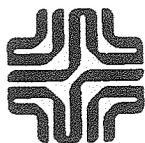
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City _____

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Phone _____

have local field representative see me with sample of Signal Duct for my evaluation.



Integral Corporation

3. Bond, R., "Traffic Consultant Speaks on Parking Designs for the 80s," *Shopping Centre Canada*, October 1980.
4. Keneipp, J., "Trends in Automobile Sizes," April 1982. (Unpublished paper)
5. International Council of Shopping Centers and the American Planning Foundation, "Compact Car Research at Regional Shopping Centers." (Study in progress)



Box (F) has authored more than 60 technical publications in traffic engineering, has chaired five Recommended Practice committees of the Institute, and has received several awards for committee projects.



Kenig (F) is a vice president with Barton-Aschman Associates, Inc., and is in charge of their traffic studies and parking design activities in their Evanston, Illinois, office. He has written several recent papers on parking and has been very active in Institute affairs.

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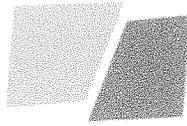
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MEMORANDUM

To: Mary O'Neil, Senior Planner
City of Burlington, Department of Planning and Zoning

From: Gail Henderson-King *guk*

Date: August 28, 2014

Re: Fletcher Allen Health Care Inpatient Building – Final Site Plan Application
Updated Lighting Plan Changes

We have provided the following updated lighting plans for the Fletcher Allen Health Care Inpatient Building Final Site Plan application:

- Sheet LI-1.0: Lighting Plan Inpatient Building Project
- Sheet LI-1.1: Lighting Plan UVM Parking Reconfiguration
- Sheet A6-2: Inpatient Building First Floor Reflected Ceiling Plan

The following information describes the changes made to the lighting plans.

Outdoor Lighting

The light poles for the Fletcher Allen fixtures (Fixture C and CL) are proposed to be 20' height. The light poles for the UVM fixtures (Fixture K and K2) are proposed to be 17' height. These poles match the existing poles used on the respective institutional campuses and are in conformance with Section 5.5.2 Outdoor Lighting of the City Comprehensive Development Ordinance.

Where parking lots have walkways that border them, it is challenging to have two different light levels for each. In order to address the maximum illumination level requirements in the parking lots, several fixtures that provide light to both parking areas and walkways due to their close proximity to each other now have lower LED bulb wattage. As a result, the maximum illumination level in the parking lots is now under 4 footcandles and the maximum to minimum uniformity ratio is reduced to 17:1. These are now in conformance with Section 5.5.2 Outdoor Lighting of the City Comprehensive Development Ordinance.

The illumination level on the proposed walkways is under 2 footcandles with the exception of several areas. As stated above, where walkways border parking areas, it is challenging to have two different light levels for each. There are several places where we were not able to stay under the 2 footcandle requirement. At several crosswalks, the illumination level rises slightly above 2 footcandles: at the beginning of Hospital Drive, at the entrance to UVM's parking on Hospital Drive, and at the crosswalk by light fixture C-13. In addition, there is also a spot along the walkway leading to the Emergency Department by light fixture C-8 where this same situation occurs. Because Hospital Drive and the associated parking areas are the main entryway into the Emergency Department, the crosswalk areas are important to have adequately light for pedestrian safety and to avoid conflicts with vehicles. The walkway lighting to the Emergency Department needs to be adequately illuminated for night time arrival.

Therefore, we request the DRB to review Fletcher Allen Health Care Inpatient Building walkway lighting in these areas under Section 5.2 7, Security Lighting of the City Comprehensive Development Ordinance.

Building Lighting

Sheet A6-2: Inpatient Building First Floor Reflected Ceiling Plan now includes labels for the ceiling lighting for the Emergency Department. The Legend labels correspond with the updated lighting cut sheets.

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GENERAL NOTES

ALL CONTRACTORS ARE REQUIRED TO CONTACT THE UTILITY LOCATE COMPANIES, THE COUNTY PUBLIC WORKS DEPARTMENT, AND ANY OTHER PUBLIC OR PRIVATE AGENCY NECESSARY FOR UTILITY LOCATION PRIOR TO ANY CONSTRUCTION.

THIS DRAWING IS A PART OF A COMPLETE SET OF DOCUMENTS, SPECIFICATIONS, ADDITIONAL DRAWINGS, AND EXHIBITS. UNDER NO CIRCUMSTANCES SHOULD THESE PLANS BE USED FOR CONSTRUCTION PURPOSES WITHOUT EXAMINING ACTUAL LOCATIONS OF UTILITIES ON SITE, AND REVIEWING ALL RELATED DOCUMENTS MENTIONED HEREIN, INCLUDING A RELATED DOCUMENTS PREPARED BY THE PROJECT ENGINEERS, AND ARCHITECTS. DO NOT USE THIS SET OF DRAWINGS FOR CONSTRUCTION PRIOR TO NOTIFYING THE LANDSCAPE ARCHITECT.

LIGHTING AND IRRIGATION EXISTS THROUGHOUT THIS ENTIRE SITE. LOCATION OF LIGHTING AND SUPPLY SHOULD BE REVIEWED PRIOR TO CONSTRUCTION.

THE LOCATION OF THE UNDERGROUND UTILITIES ARE LOCATED ON ENGINEERING DRAWINGS PREPARED BY THE PROJECT ENGINEER. THE MOST CURRENT REVISION IS HERE IN MADE PART OF THIS DOCUMENT. UNDERGROUND UTILITIES EXIST THROUGHOUT THIS SITE AND MUST BE LOCATED PRIOR TO CONSTRUCTION. WHERE UNDERGROUND UTILITIES EXIST, FIELD ADJUSTMENT MUST BE APPROVED BY A REPRESENTATIVE OF THE OWNER PRIOR TO INSTALLATION. NEITHER THE OWNER NOR THE LANDSCAPE ARCHITECT ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE CONTRACTORS ACCURACY IN LOCATING THE INDICATED PLANT MATERIAL, AND UNDER NO CIRCUMSTANCES SHOULD THESE PLANS BE USED WITHOUT REFERENCING THE ABOVE MENTIONED DOCUMENTS.

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EXTERIOR SITE LIGHTING KEY

LABEL	SYMBOL	QTY.	BRAND	DESCRIPTION	CONFIGURATION	DISTRIBUTION	LAMP WATTAGE
C	☉	16	LUMEC	OPTICONE w/ EcoFit Retrofit 20' MOUNTING HEIGHT	SINGLE	TYPE V	90 WATT EcoFit LED Retrofit
CL	☉	3	LUMEC	OPTICONE w/ EcoFit Retrofit 20' MOUNTING HEIGHT	SINGLE	TYPE V	42 WATT EcoFit LED Retrofit
g12	☉	11	DESIGNPLAN	MOONSHINE WALL LIGHT MA2	SINGLE	MEDIUM BEAM	70 WATT METAL HALIDE
HL	☉	5	BEGA	RECESSED WALL MOUNTED LUMINAIRE 2039LED	SINGLE	ETCHED DIFFUSER	13.4 WATT LED
EX	☉			EXISTING LIGHT FIXTURES TO REMAIN			

This lighting plan is a design which is integrated with the neighboring UVM project. Illumination levels and fixture placement were done to maximize efficiency within both project areas.

ISO-CONTOUR KEY

ISO-CONTOUR	FOOTCANDLE VALUE
— (Red line)	1.00
— (Yellow line)	0.50
— (Blue line)	0.25

STATISTICAL AREA SUMMARY

Grid Type: Horizontal Illuminance Grid Units: Footcandles	Ave	Max	Min	Ave/Min	Max/Min
	Fletcher Allen ED Parking Lot	1.58	3.30	0.20	7.90

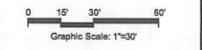


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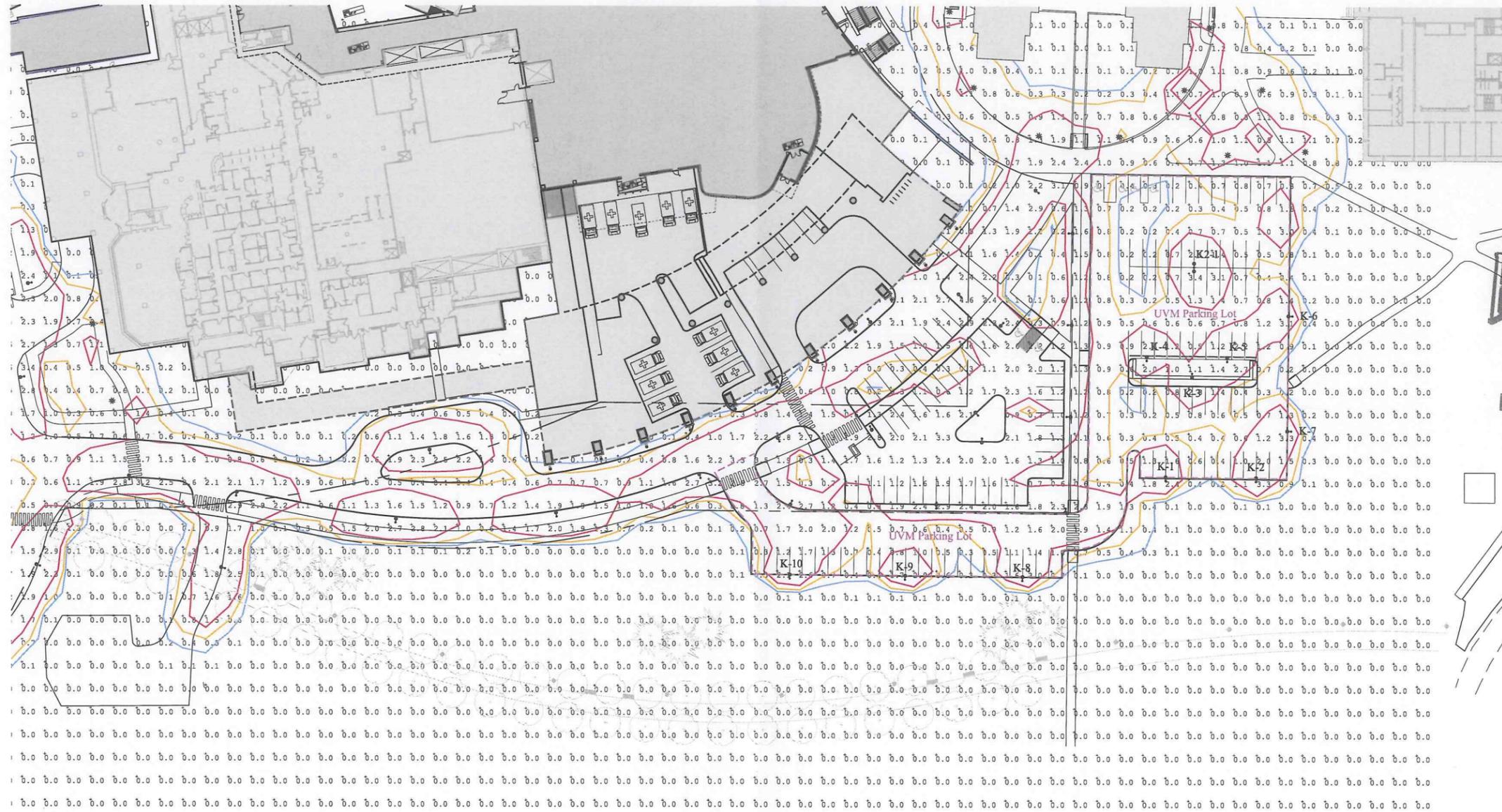
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Title
Lighting Plan
Inpatient Building Project

Sheet Number:

LI-1.0

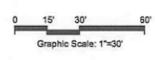
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EXTERIOR SITE LIGHTING KEY

LABEL	SYMBOL	QTY.	BRAND	DESCRIPTION	CONFIGURATION	DISTRIBUTION	LAMP WATTAGE
K	●	10	RAB	ALED26 17" MOUNTING HEIGHT	SINGLE	TYPE 4	26 WATT LED
K2	●	1	RAB	ALED26 17" MOUNTING HEIGHT	TWIN@180°	TYPE 4	26 WATT LED
EX	●			EXISTING LIGHT FIXTURES TO REMAIN			

This lighting plan is a design which is integrated with the neighboring FAHC project. Illumination levels and fixture placement were done to maximize efficiency within both project areas.

ISO-CONTOUR KEY

ISO-CONTOUR	FOOTCANDLE VALUE
— (Red line)	1.00
— (Yellow line)	0.50
— (Blue line)	0.25

STATISTICAL AREA SUMMARY

Grid Type: Horizontal Illuminance Grid Units: Footcandles	Ave/Min				
	Ave	Max	Min	Ave/Min	Max/Min
UVM Parking Lot	0.98	3.40	0.20	4.90	17.00

Title
 Lighting Plan
 UVM Parking Configuration
 Sheet Number:
LI-1.1
 Project Number:
 File:

C:\Users\gravel\Documents\FHC West Wing Bed Tower_201254_gravel.rvt



BUILDING FIXTURE LEGEND

LABEL	SYMBOL	DESCRIPTION
AA	---	AXIS WETBEAM 4 LED 3FT
BB	---	AXIS WETBEAM 4 LED 4FT
CC	---	AXIS WETBEAM 4 LED 8FT
DD	---	SEE Q12 DESCRIPTION, PROVIDE DOWNLIGHT
EE	---	MURPHY/BEY OUTDOOR LINE PERFORMANCE SOURCE 1011/50, MATCH EXISTING
FF	---	KURT VERSEN CO. DIRECTIONAL DOWNLIGHT, 2x4x6 MEDIUM BEAM
Q12	---	SEE L11.0
EX	---	EXISTING TO REMAIN

SEE L11.0 FOR MORE INFORMATION AND SITE LIGHTING

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Boston, Massachusetts
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Williston, VT 05495
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Fletcher Allen
HEALTH CARE

*In alliance with
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**FIRST FLOOR
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A6-2

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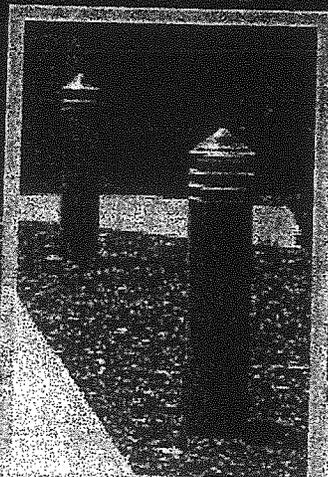
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Opticone Series

OPC/OPCS/OPCB



OPC™-SG1-2 luminaire on a ATR pole



OPCB™ bollard



LUMEC

Fletcher Allen Inpatient Building

Site Light Fixture C, CL

OPC Luminaire

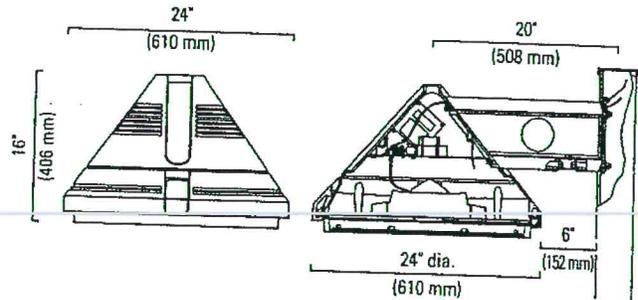
The **Opticone OPC™** luminaire consists of a one-piece cast-aluminum pinched-cone housing, a round lens-frame assembly and a latch mechanically assembled together. The luminaire is fully gasketed.

The one-piece cast-aluminum lens-frame comes with a copolymer ethylene propylene gasket (EPDM) and a tempered glass lens.

A 3-point spring-type double-position cast-aluminum latch permits tool-free access to the lamp and ballast plate.

The ballast plate hinges down to provide tool-free access to the ballast.

OPC luminaire is UL and CSA approved.



OPC - SG1
EPA: 2.40 sq. ft.
Weight: 62 lbs (28.1 kg)

Lamp Guide

Optics	OPC		OPCS	
	SG1/2/3/ Q/FM	SE	SCB/ SHB	SG1/2/3/ Q/FM
70 MH, medium	—	• ¹	•	—
100 MH, medium	—	• ¹	•	—
175 MH, mogul	—	• ¹	•	—
250 MH, mogul	—	• ¹	•	—
400 MH, mogul	— ¹	• ¹	N/A	• ¹
750 MH, mogul	— ¹	N/A	N/A	N/A
1000 MH, mogul	— ¹	N/A	N/A	N/A
50 HPS, mogul	—	• ²	•	—
70 HPS, mogul	—	• ²	•	—
100 HPS, mogul	—	• ²	•	—
150 HPS, mogul	—	• ²	•	—
250 HPS, mogul	—	• ²	•	• ³
310 HPS, mogul ¹	—	• ²	•	• ³
400 HPS, mogul	—	• ²	•	• ³
750 HPS, mogul	•	N/A	N/A	N/A

- Remote ballast in pole.
- ¹ Requires a polycarbonate (175W max.) or tempered glass sag lens.
- ² Requires a reduced jacket lamp.
- ³ Not available in 347 volts.
- ⁴ Not available with SGFM optics.

OPC™ and OPCS™ luminaires accommodate H.I.D. or incandescent lamps as shown in the above table.

The UL or CSA-recognized CWA-type ballast features a -30F° (-34C°) lamp-starting capacity, a power factor of 90% or better and a regulation of lamp power within ±10% of rated input voltage. HPS ballasts operate within ANSI trapezoidal limits.

The luminaire's lens frame, secured by a 3-point spring-type double-position cast-aluminum latch, pivots along a housing integrated hinge to permit tool-free access to the lamp and ballast plate.

The ballast is integrated in the hood of the luminaire, on a unitized ballast tray, or is remote in the pole base.

For the **OPCB™** bollard, please consult bollard literature or www.lumec.com web site.

Optical Systems

SG optics

Segmented cut-off reflector system set in faceted arc-image duplicating patterns

 SG1: Asymmetrical (I)	 SG2: Asymmetrical (II)
 SG3: Asymmetrical (III)	 SGQ: Symmetrical (V)
 SGFM: Forward-throw	

SE optics

 Small segmented cut-off reflector set in faceted arc-image duplicating patterns

SE5: Symmetrical (V)
SE3: Asymmetrical (III)

SCB and SHB optics (OPC only)

 Sealed optical chamber consisting of a reflector permanently assembled on top of a tempered glass drop lens

SCB3M: Asymmetrical cut-off (III)
SHB3M: Asymmetrical hyperextensif (III)

For the SCB and SHB optics, the sleeve and shutter permit exact positioning of the lamp.
(clear lamp not included).

For further information, refer to the *Outdoor Lighting Application Guide*.

Ordering Sample

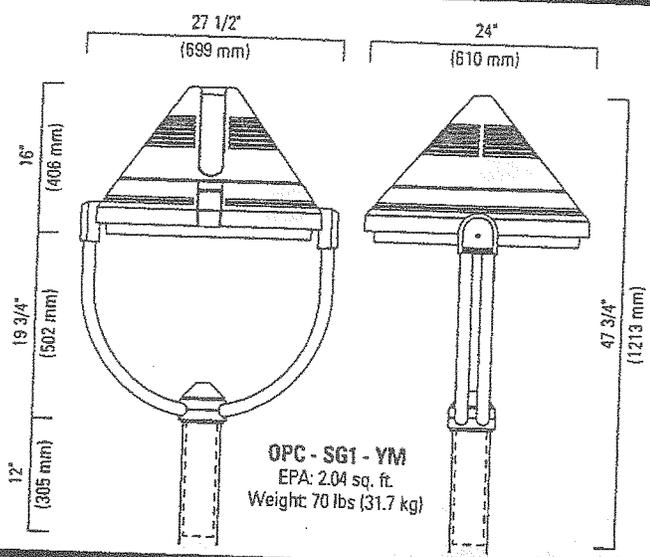
Lamp	Luminaire	Optical System	Voltage	Mounting & Configuration	Pole	Finish	Options
250 HPS	OPC	SCB	240V	1A	SM6-15	BKTX	FS

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Site Light Fixture C, CL

OPC-YM Luminaire on Yoke-mount



OPCS Luminaire

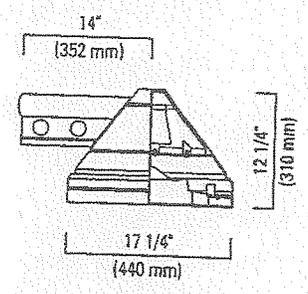
The Opticone OPCS™ luminaire is similar to the OPC but in a smaller size and consists of a two-piece spun and cast-aluminum pinched-cone housing, a round lens-frame assembly and a latch mechanically assembled together. The luminaire is fully gasketed.

The one-piece cast-aluminum lens-frame comes with a copolymer ethylene propylene gasket (EPDM) and a tempered glass lens.

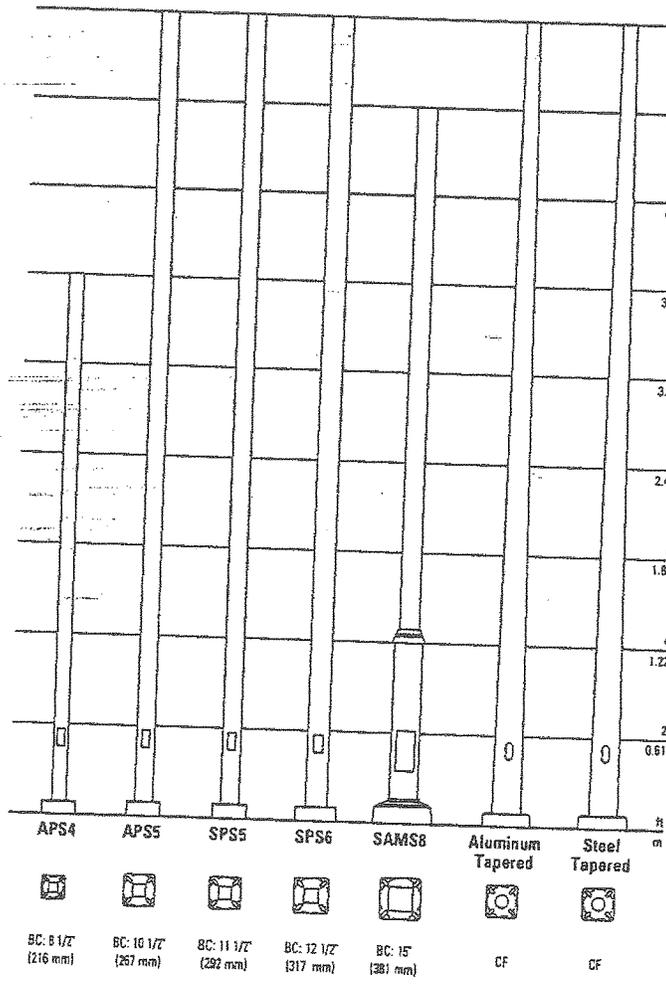
A 3-point spring-type double-position cast-aluminum latch permits tool-free access to the lamp and ballast plate.

The ballast plate hinges down to provide tool-free access to the ballast.

OPCS luminaire is UL and CSA approved.



Poles



Finishes

16 Standard Colors Available

The specially-formulated textured (TX) Lumital powder coat is available in a range of 16 standard colors. This unique coating of thermosetting polyester resins provides a highly-durable UV-resistant exterior finish as per ASTM G7.

Lumital coatings are specially formulated for outstanding salt-spray resistance according to ASTM B117 standards.

All surfaces are chemically treated using a four-step (aluminum) or six-step (steel) process prior to painting. Consult Lumec for complete specifications.

SC Special Color
Provide a 4" (102 mm) square color chip.

It is possible to order smaller minimal quantities of powder paint at a premium. Your representative will be able to tell you if a powder coating can be developed for your project.

Lumiseal, a biofriendly reactive organic conversion coating, is applied on all aluminum parts that are subject to salt-spray corrosion. Consult Lumec for complete specifications.

Please note that where quantities do not warrant it, Lumec reserves the right to use an oven-cured liquid polyurethane finish.

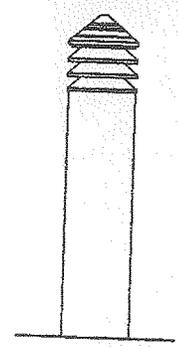
Luminaire Options

- FS Fusing (Consult Factory)
- HS House shield (SG optics only)
- DL Drop lens

Pole Options

- HB Hinged base (APR4 & APS4 poles only)
 - DR* Duplex receptacle (120 volts only)
 - GFI* Duplex receptacle with ground fault interrupter (120 volts only)
 - PH Photoelectric cell
 - LS* Provision for loudspeaker outlet
 - BA* Banner arm
 - LBCS Decorative base cover (Available with APR4 and SPR4 poles only)
 - IP Interior paint (pole only, consult factory for applicable poles)
- * Consult the Pole Guide for feasibility with cast-aluminum shafts.

OPCB Bollard



For the OPCB™ bollard. Consult bollard literature or www.lumec.com web site.

Consult the Pole Guide for details and the complete line of poles.

Fletcher Allen Inpatient Building

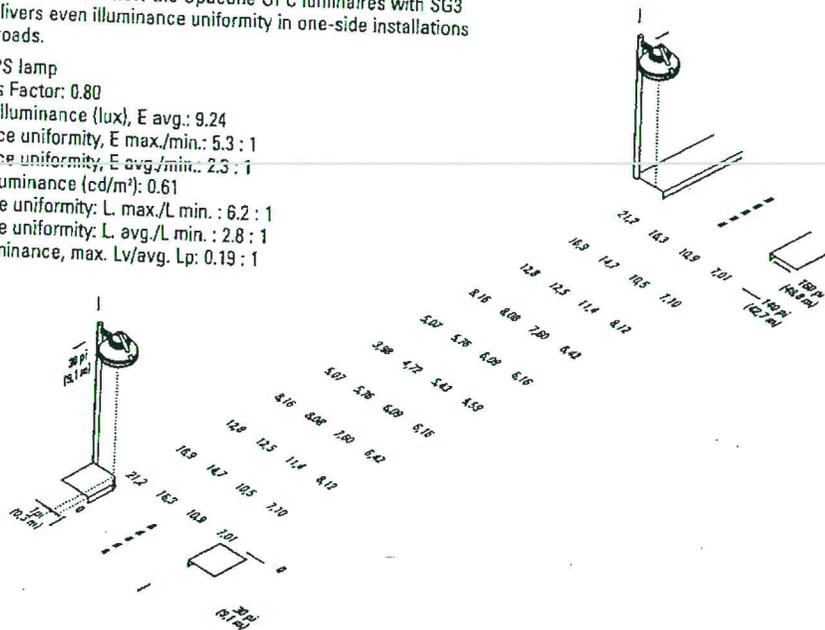
Site Light Fixture C₁ CL

OPC/OPCS/OPCB

Opticone OPC with SG3 optical systems Pavement luminance for two-lane road lit from one side

This illustration shows how the Opticone OPC luminaires with SG3 optics delivers even illuminance uniformity in one-side installations on wide roads.

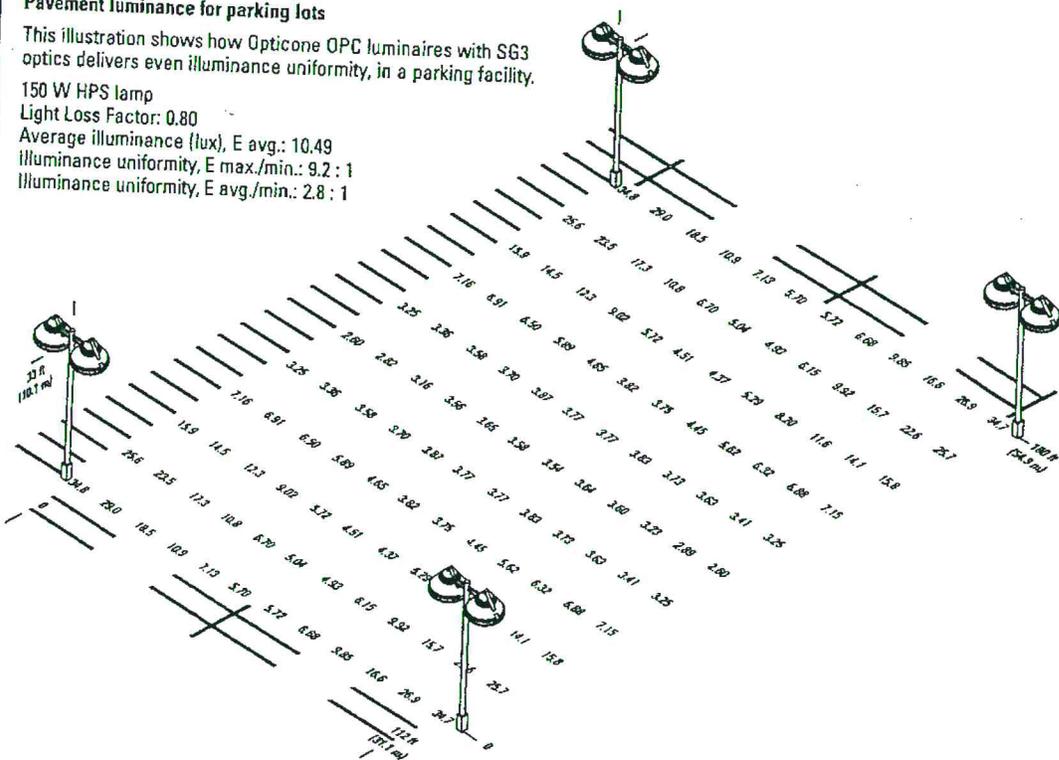
- 150 W HPS lamp
- Light Loss Factor: 0.80
- Average illuminance (lux), E avg.: 9.24
- Illuminance uniformity, E max./min.: 5.3 : 1
- Illuminance uniformity, E avg./min.: 2.3 : 1
- Average luminance (cd/m²): 0.61
- Luminance uniformity: L max./L min.: 6.2 : 1
- Luminance uniformity: L avg./L min.: 2.8 : 1
- Veiling luminance, max. Lv/avg. Lp: 0.19 : 1



Opticone OPC with SG3 optical systems Pavement luminance for parking lots

This illustration shows how Opticone OPC luminaires with SG3 optics delivers even illuminance uniformity, in a parking facility.

- 150 W HPS lamp
- Light Loss Factor: 0.80
- Average illuminance (lux), E avg.: 10.49
- Illuminance uniformity, E max./min.: 9.2 : 1
- Illuminance uniformity, E avg./min.: 2.8 : 1



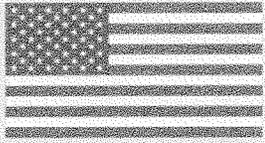
LUMEC

Opticone OPC/OPCS/OPCB
LUMEC
150 W HPS lamp
Light Loss Factor: 0.80
Average illuminance (lux), E avg.: 10.49
Illuminance uniformity, E max./min.: 9.2 : 1
Illuminance uniformity, E avg./min.: 2.8 : 1

EcoFit LED Light Engine

The smart solution. The right fit.™

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Made in the USA

Meets ARRA Guidelines
Manufactured in Lee's Summit, MO

Universal Application

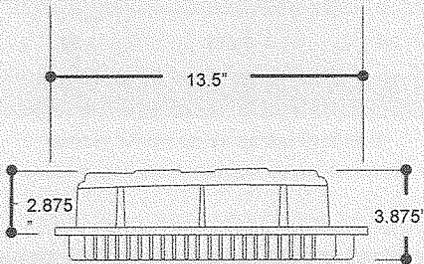
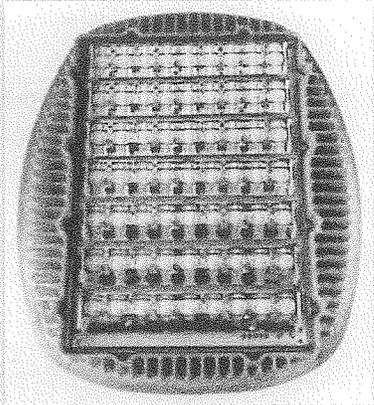
- Roadway
- Parking Lot – shoebox, pendant, post-top (with adapter plate)
- Parking Garage – housing required
- Indoor High Bay – housing required

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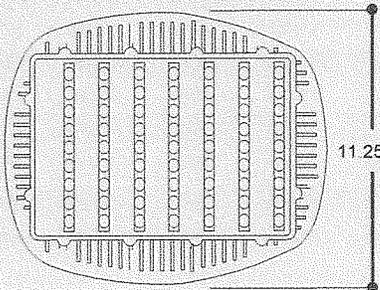
Independent Performance Tests

EcoFit provides 3rd party validation from the most recognized testing laboratories available on www.ecofitlighting.com.

- Photometrics (LM-79)
- Thermal management (LM-80)
- Safety (UL 8750/1598, CSA C22.2)
- Corrosion (ASTM-B117)
- ISO 9000-2001 manufacturer
- RoHS compliant
- Ingress protection (IP-66)
- Pole vibration (ANSI-C136.3)
- Mechanical stress
- Surge Protection (IEEE C62.45)
- Transient protection (IEEE C62.41)
- Noise (47CFR-15B)



Product weight = 13 pounds.



Approvals and Endorsements

Design Lights Consortium approved
DOE Lighting Facts listed (all models)
Cree LED City/University approved
International Dark Sky Association approved
PG&E Pre-qualified vendor
SCE Pre-qualified vendor



Specifications subject to change without notice.
U.S. Patents D611647, D611648. Other U.S. and International patents pending.
© EcoFit Lighting LLC 2011
Revision 4.0 (3/11)

EcoFit Lighting
8527 Bluejacket Street
Lenexa, Kansas 66214
(866) 789-9449
www.ecofitlighting.com

EcoFit® LED Light Engine

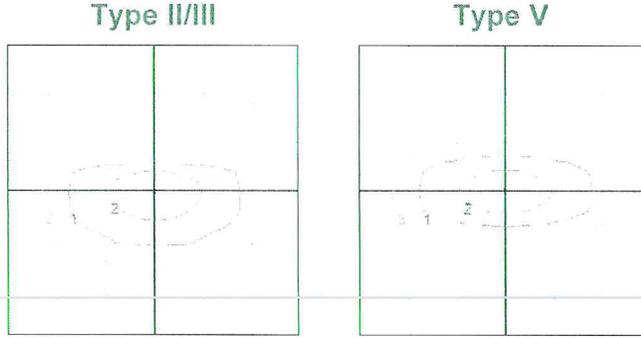
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Photometrics

Isofootcandle Plots

Initial footcandles at grade.
90/525mA unit example.

Gridlines represent units of mounting height of 20 feet.



Standard Features

- 0-10V dimming
- Overtemp protection
- Lightning Arrestor (10kV/5kA)
- Warranty – 5 year on power supply, LEDs, 10 year on chassis/housing

LED & Electrical Performance

Model	Drive Current (mA)	CRI	Input Power (W)	Input Current (120V)	Input Current (240V)	Type III		Type V	
						Delivered Lumens	Total System Efficacy (Lm/W)	Delivered Lumens	Total System Efficacy (Lm/W)
30	350	≥80	37	0.317A	0.185A	2,265	61	2,262	60
30	525	≥81	56	0.481A	0.235A	3,005	54	2,973	52
42	350	≥81	48	0.408A	0.223A	3,144	65	3,180	65
42	525	≥81	73	0.620A	0.322A	4,145	57	4,192	56
63	350	≥81	70	0.588A	0.308A	4,533	64	4,488	65
63	525	≥82	106	0.892A	0.450A	5,900	56	5,784	55
90	350	≥70	91	0.761A	0.380A	6,365	70	7,375	82
90	525	≥70	136	1.133A	0.567A	8,252	61	9,764	71

1. Input voltage (120-277 VAC).

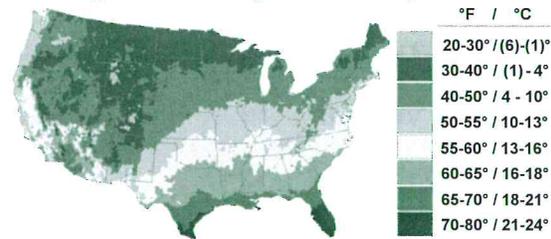
2. 480V also available. Operating frequency 50-60 Hz.

3. Power factor > 0.90, THD < 20%.

4. All BUG ratings are B2-U0-G1 or below.

LED Junction Temperature (T_J) & Projected L₇₀ Life

Average Annual Nighttime Temperatures



Source: National Climatic Data Center, U.S. Department of Commerce

L70 Lifetime Expectancy (LM-80 Test Data)

Model	Average Nighttime Outdoor Temperature									
	LEDs	Drive Current	<32°F (0°C)	41°F (5°C)	50°F (10°C)	59°F (15°C)	68°F (20°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)
30	350	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
30	525	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
42	350	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
42	525	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
63	350	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
63	525	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
90	350	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000
90	525	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000	≥75,000

Note: L₇₀ life projections are provided by Philips Lumileds, and are based on IES LM-80 testing and IES TM-21 extrapolation methods. Using these methods, Lumileds projects a worst case of 75,000 L₇₀ hours for 4100K LEDs operated at 700mA and at LED temperatures (T_J) of 105°C. Since these levels of drive current and LED temperature are well above EcoFit's highest levels, the L₇₀ hours shown above should be regarded as conservative. For more information, see www.EcoFitLighting.com.

Ordering Information

D	2/3	120/240	350	CXRE	30	4600	CE
Product Series	Distribution 2/3 = Type II/III 5 = Type V	Input Voltage 120-240 = Universal (120-240 VAC) 277 = 277 VAC	LED Drive Current 350 = 350mA 525 = 525mA	LED Supplier CXPE = Cree X-PE REBEL = Lumileds Rebel	LED Quantity 30 = 30 LEDs 42 = 42 LEDs 63 = 63 LEDs 90 = 90 LEDs	LED Color Temperature 4600 = 4600K (Neutral) Nominal Other color temperatures available by request.	Housing AP = Adaptor Plate CE = Ceiling FL = Floodlight CO = Cobra Head

AM6

Round Aluminum Bottleneck Pole

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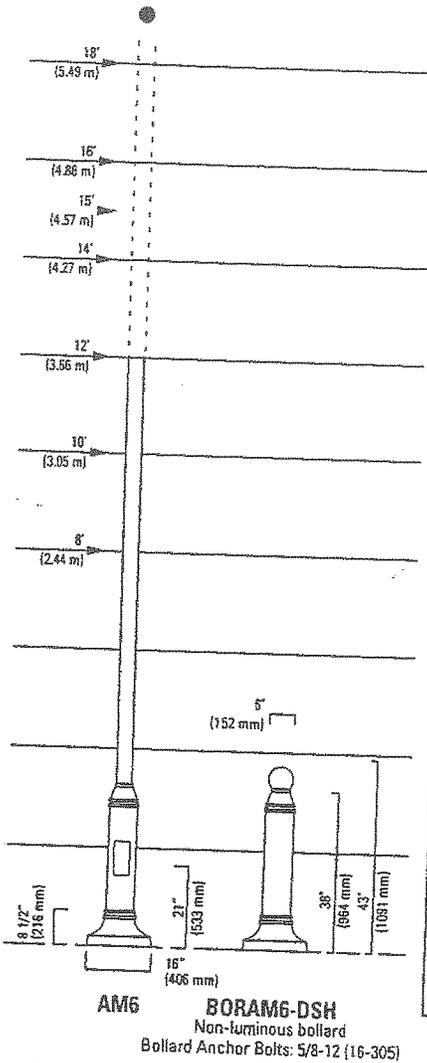
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Pole

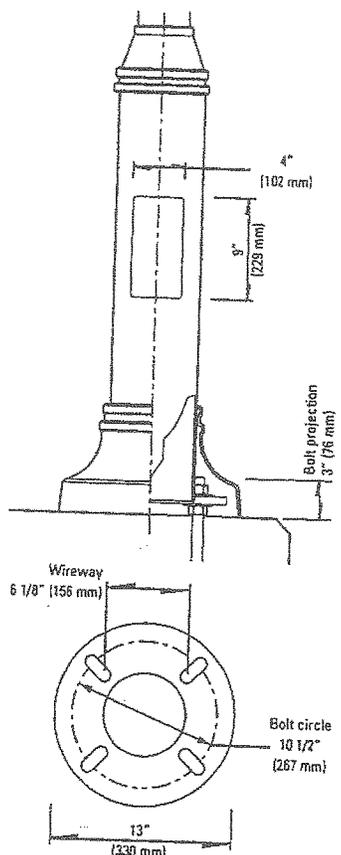
Guide



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Base Details:



Comes with 4 anchor bolts, 8 nuts and washers.
 B.C. from: 8 3/4" to 11" (222 to 279 mm)

Specifications:

Pole: made from a one-piece, seamless 4"-round (102 mm) tube of extruded aluminum welded over and in a 6 5/8"-round (168 mm) extruded-aluminum pole base. The assembly is welded to both the top and bottom of a reinforced base cast from zinc-rich aluminum. A 4" by 9" (102 by 229 mm) maintenance opening, complete with cover and copper ground lug, is centered 21" (533 mm) from the bottom of the anchor plate.
Joint cover: made from two pieces of cast aluminum mechanically fastened to the junction with stainless steel screws.
Base cover: made from two pieces of cast aluminum mechanically fastened to the base with stainless steel screws.
Finish: "Hot Dip" chemical etching preparation. Luminal polyester powder coat textured finish. Available in 16 standard colors. Durable UV-resistant exterior finish as per # ASTM G7 and outstanding salt-spray resistance according to # ASTM D2247 testing procedures.

Options:

- DE:** Pole base buried 5' (1524 mm) in the ground (see details on page 83).
- LS:** Provision for loudspeaker outlet
- PH7:** Button-type photoelectric cell (specify operating voltage)
- PH8:** Quarter-turn type photoelectric cell (specify operating voltage)
- PH9:** Shorting cap for single phase only
- DR:** Duplex receptacle (120V line volt. only)
- GFI:** DR with common ground fault interrupter (120V line voltage only)
- BASXX:** One single banner arm
- BABSXX:** One single break-away banner arm
- BADXX:** One double banner arm
- BABDXX:** One double break-away banner arm

Note: EPA recommendations are calculated according to AASH-T0 standards and include a 30% gust factor, with a 50-lb. (22.7 kg) load applied at 1ft. (305 mm) above the center of the pole. The maximum EPA rating shown is 30.0 sq. ft. Some poles may exceed this rating.
Bollard: The pole base is available with a DSH cast-aluminum decorative sphere (non-luminous).
 For other options, please consult the factory.

Ordering Information

Catalogue number	Nominal height		Section	Wall thickness		Weight		EPA rating			Base size		Bolt circle		Anchor bolts		
	ft.	m		in.	mm	lbs.	kg	70mph	80mph	100mph	in.	mm	in.	mm	in.	mm	
AM6F-8	8	2.44	4	102	0.125	3.2	27	12	18.4	14.3	9.2	13	330	10 1/2	267	3/4-20	19-508
AM6U-8	8	2.44	4	102	0.226	5.7	37	17	30.0	25.0	16.3	13	330	10 1/2	267	3/4-20	19-508
AM6F-10	10	3.05	4	102	0.125	3.2	31	14	13.2	10.2	6.4	13	330	10 1/2	267	3/4-20	19-508
AM6U-10	10	3.05	4	102	0.226	5.7	41	19	23.4	18.0	11.3	13	330	10 1/2	267	3/4-20	19-508
AM6F-12	12	3.66	4	102	0.125	3.2	35	16	9.9	7.4	4.4	13	330	10 1/2	267	3/4-20	19-508
AM6U-12	12	3.66	4	102	0.226	5.7	45	20	15.8	11.8	7.3	13	330	10 1/2	267	3/4-20	19-508
AM6F-13	13	3.97	4	102	0.125	3.2	36	16	8.1	6.0	3.5	13	330	10 1/2	267	3/4-20	19-508
AM6U-13	13	3.97	4	102	0.226	5.7	46	21	13.1	9.9	5.9	13	330	10 1/2	267	3/4-20	19-508
AM6F-14	14	4.27	4	102	0.125	3.2	38	17	5.3	3.9	2.2	13	330	10 1/2	267	3/4-20	19-508
AM6U-14	14	4.27	4	102	0.226	5.7	48	22	8.7	6.5	3.9	13	330	10 1/2	267	3/4-20	19-508
AM6F-15	15	4.57	4	102	0.125	3.2	40	18	4.3	3.0	1.6	13	330	10 1/2	267	3/4-20	19-508
AM6U-15	15	4.57	4	102	0.226	5.7	50	23	7.3	5.3	3.0	13	330	10 1/2	267	3/4-20	19-508
AM6U-16	16	4.88	4	102	0.226	5.7	52	24	6.0	4.3	2.4	13	330	10 1/2	267	3/4-20	19-508
AM6W-16	16	4.88	4	102	0.318	8.1	74	34	7.9	5.8	3.2	13	330	10 1/2	267	3/4-20	19-508
AM6U-18	18	5.49	4	102	0.226	5.7	55	25	4.2	2.8	1.3	13	330	10 1/2	267	3/4-27	19-686
AM6W-18	18	5.49	4	102	0.318	8.1	87	39	5.6	3.9	2.0	13	330	10 1/2	267	3/4-27	19-686
W6W-20	20	6.10	4	102	0.318	8.1	96	44	3.9	2.6	1.0	13	330	10 1/2	267	3/4-27	19-686

Other pole thicknesses are available for use with banner arms. Consult factory.
 Lumec neither designs nor makes recommendations as to the design of concrete bases.

16 Note: Lumec reserves the right to modify the above details to reflect changes in the cost of materials and/or production and/or design without prior notice.

Fletcher Allen Inpatient Building

Site Light Fixture HL

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[Back to Recessed Luminaires](#)



Recessed wall with louvers

Designed for low mounting heights for the illumination of steps, stairs, ramps, aisles and other interior and exterior locations.

Recessed luminaires with die cast aluminum faceplate with integral louvers. Etched tempered glass diffuser.

See individual product page for LED driver and color temperature information.

Fluorescent units include integral electronic ballasts.

U.L. listed, suitable for wet locations.

Protection class: IP65

Finish: Standard BEGA colors.



Click product # for details			Lamp	β	Temp°C	A	B	C
2038LED	EXPRESS	ADA	10.1W LED			13	4 7/8	4
2039LED	EXPRESS	ADA	13.4W LED			16 1/2	4 7/8	4
2040LED	EXPRESS	ADA	16.8W LED			20 1/2	4 7/8	4
2226P	EXPRESS	ADA	(1) 18W CF twin-4p			13	4 7/8	4
3126P		ADA	(1) 27W CF twin-4p			16 1/2	4 7/8	4
3125P		ADA	(1) 39W CF twin-4p			20 1/2	4 7/8	4

ALED26

ALED Area Lights mount to 4" square steel poles at 15-20'. 1 to 4 fixtures can be mounted to each pole. IES Full Cutoff, Fully Shielded optics. 5 year Warranty.

Color: Bronze

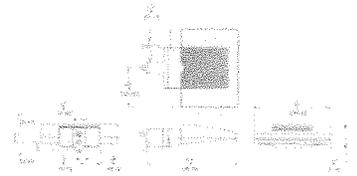
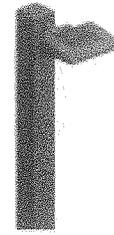
Weight: 6.5 lbs

LED Info

Watts: 26W
Color Temp: 5000K (Cool)
Color Accuracy: 70
L70 Lifespan: 100000
LM79 Lumens: 2,662
Efficacy: 90 LPW

Driver Info

Type: Constant Current
120V: 0.26A
208V: 0.16A
240V: 0.14A
277V: 0.12A
Input Watts: 30W
Efficiency: 88%



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Technical Specifications

UL Listing:

Suitable for wet locations.

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

IP Rating:

Ingress Protection rating of IP66 for dust and water.

IES Classification:

The Type IV distribution (also known as a Forward Throw) is especially suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. It produces a semiCircular distribution with essentially the same candlepower at lateral angles from 90° to 270°.

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Lumen Maintenance:

The LED will deliver 70% of its initial lumens at 100,000 hours of operation.

Housing:

Precision die cast aluminum housing, lens frame.

Gaskets:

High temperature silicone.

Effective Projected Area:

EPA = 0.27.

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Green Technology:

ALEDs are Mercury, Arsenic and UV free.

IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and 80, and have received the Department of Energy "Lighting Facts" label.

Color Consistency:

7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:

RAB's range of CCT (Correlated color temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2008.

Ambient Temperature:

Suitable for use in 40°C ambient temperatures.

Driver:

Multi-chip 26W high output long life LED Driver
Constant Current, 720mA, Class 2, 6kV Surge
Protection, 100V-277V, 50-60 Hz, 100-240V.4 Amps.

THD:

7.5% at 120V, 11% at 277V



Cold Weather Starting:

The minimum starting temperature is -40°F/-40°C.

Thermal Management:

Cast aluminum Thermal Management system for optimal heat sinking. The ALED is designed for cool operation, most efficient output and maximum LED life by minimizing LED junction temperature.

Dark Sky Approved:

The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

California Title 24:

California Title 24

Equivalency:

The ALED26 is Equivalent in delivered lumens to a 70 W Metal Halide Area Light.

HID Replacement Range:

The ALED26 can be used to replace 42 CFL - 100W Metal Halide Area Light based on delivered lumens.

Patents:

The ALED design is protected by U.S. PATENT D608,040 and patents pending in the U.S., Canada, China, Taiwan and Mexico.

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.

Country of Origin:

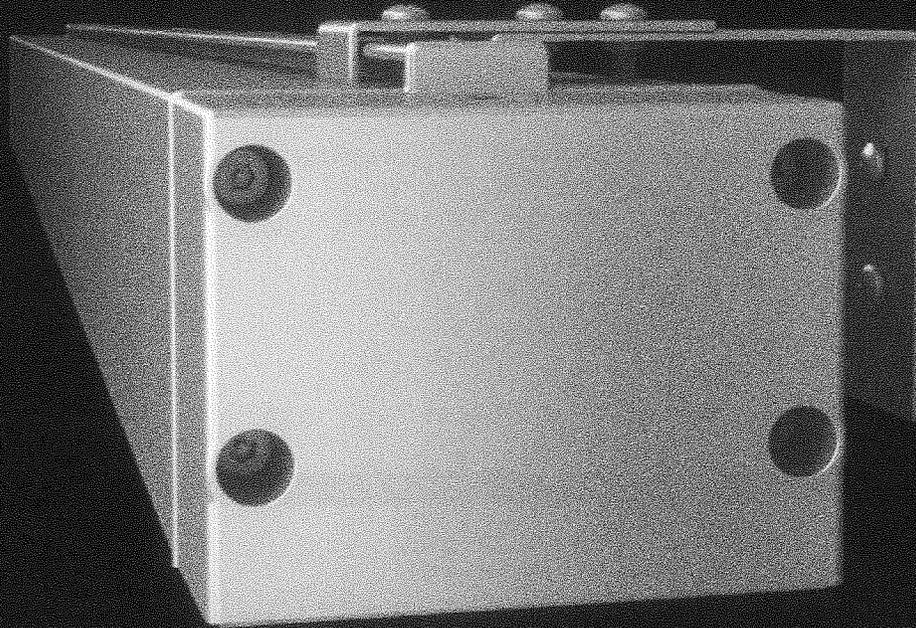
Designed by RAB in New Jersey and assembled in Taiwan.

Trade Agreements Act Compliant:

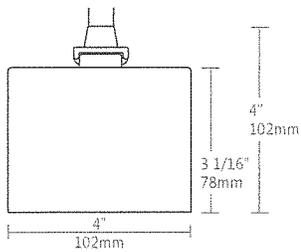
This product is a product of Taiwan and a "designated country" end product that complies with the Trade Agreements Act.

GSA Schedule:

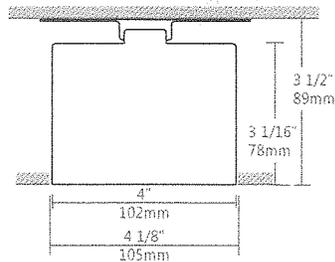
Suitable in accordance with FAR Subpart 25.4.



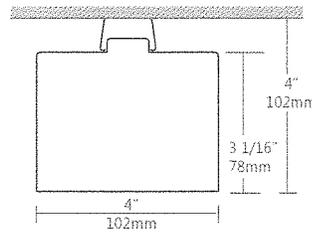
DIMENSIONS



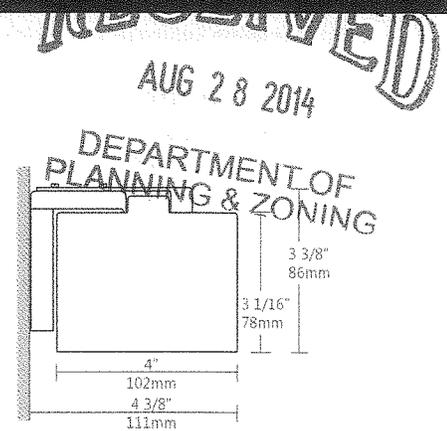
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RECESSED



SURFACE



WALL



Wet Beam brought a sleek and compact Beam luminaire for wet locations to the market. It suits both indoor spaces such as bathrooms, spas, and indoor parking garages as well as outdoor spaces such as under-canopy installations. Like its fluorescent counterpart, the LED version of the Wet Beam complements the Beam LED family. It allows for applications such as the continuation of indoor lines of light in the ceiling to the under-canopy outdoors to maintain a consistent appearance throughout the space.

Maintenance requirements for Wet Beam LED are very low and it allows for significant energy savings. Color rendering with Wet Beam LED is very good and, unlike with fluorescent HID or HPS luminaires, it provides white light under any ambient temperature, allowing notably occupants to feel safer.

MAIN PRODUCT SPECIFICATIONS

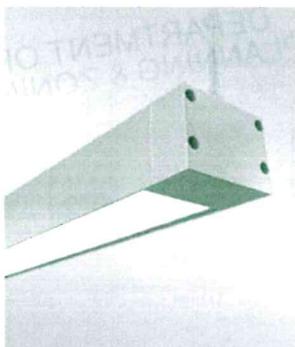
1	PRODUCT ID	2	VERSION	3	NOM. LUMENS/FT	4	COLOUR TEMP.	5	SHIELDING
WBLED	pendant led	B1	B1 (factory preset)	500	500 lm/ft	35	3500 k	F	frosted lens
WBSLED	surface led			700	700 lm/ft	30	3000 k	S	satin lens
WBWLED	wall led			900	900 lm/ft	40	4000 k		
WBRLED	recessed led								

6	LENGTH/FT	7	FINISH	8	VOLTAGE	9	DRIVER
2	2'	AP	aluminum paint	120	120V	D	dimming
3	3'	W	white	277	277V	LT	lutron
4	4'	C	custom	UNV	universal		
5	5'						
8	8'						
S#	System Run						

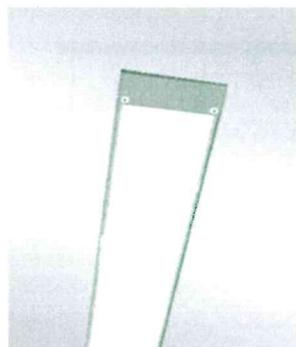


For complete luminaire specification sheets, please visit our web site at www.axislighting.com

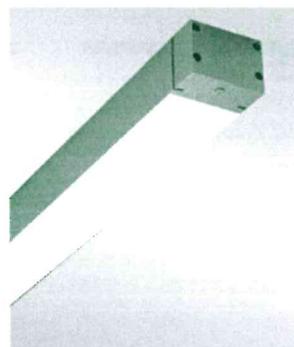
MOUNTING OPTIONS



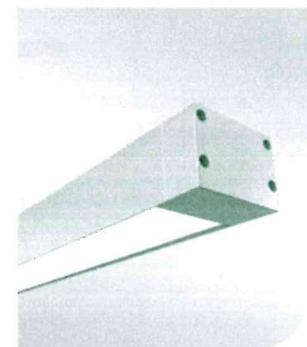
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SURFACE



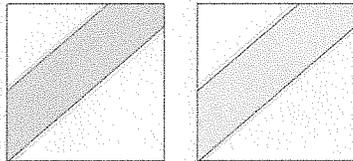
WALL

PERFORMANCE AT 3500K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
500 lm/ft	6.6w/ft	76 lm/w
750 lm/ft	10.25w/ft	73 lm/w
900 lm/ft	12.8w/ft	70 lm/w

* Based on a 11" luminaire using one driver
Please consult factory for custom lumen output and wattage.

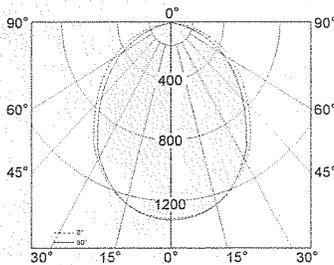
OPTICS OPTIONS



S satin lens

F frosted lens

PHOTOMETRICS

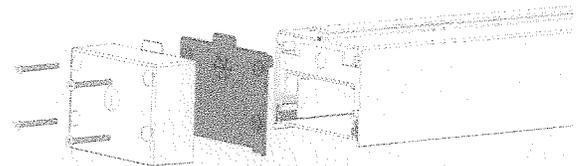


Wet Beam4 LED Direct
Luminaire Lumens: 2999 lm
Input Watts: 10.25 w
Efficacy: 74.9 lm/w
IES FILE: WBLED-B1-750-35.IES

All LED-related data in this document is valid as of Jan. 2013
Given the fast pace of LED developments, up-to-date LED info
is available on our website
at www.axislighting.com.

GASKETED END CAP

With it's gasketed end cap and lens the Wet Beam is made for wet locations, it is ideal for exterior soffits and canopies of malls, hospitals and other institutions.



LENS SIDE VIEW



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GASKETED END CAP
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CONSTRUCTION

- Housing** Extruded Aluminum (0.062" nominal)
Up to 70% Recycled Content
- End Cap** Die Cast Zinc (0.070" nominal)
- Interior Brackets** Die Formed Sheet Steel (16 ga)
- Gaskets** Moulded Elastomer (0.100" nominal)
- Lens Gaskets** Extruded Elastomer (0.045" nominal)
- Frosted Lens** Frosted Acrylic 68% transmissive

Fletcher Allen Inpatient Building

Building Light Fixture AA, 2FT

ELECTRICAL

LED	Use of OptimaLED technology based on mid-flux LED
Input Voltage	120V, 277V, UNV.
Driver	Dimming, HiLume, EcoSystem, DALI,
CRI	Minimum 80 color rendering index
CCT	Choice of 3000k, 3500k and 4000k color temperature with a great color consistency (within 3.5-step MacAdam ellipse).
LED life	Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.

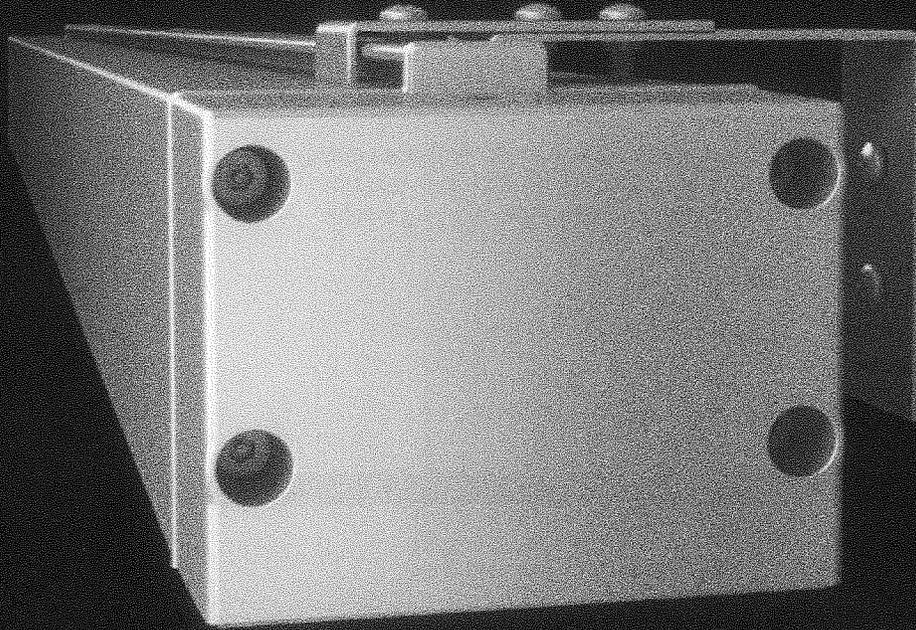
Thermal management

Aluminium housing acting as the heat spreader to maximize life.

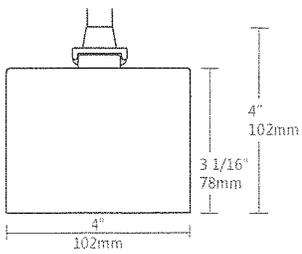
Emergency

Emergency battery pack or emergency circuit optional.

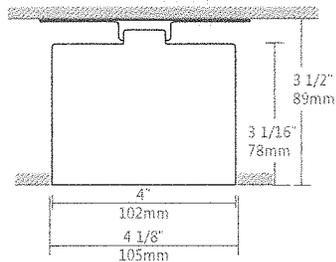




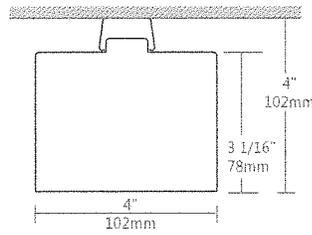
DIMENSIONS



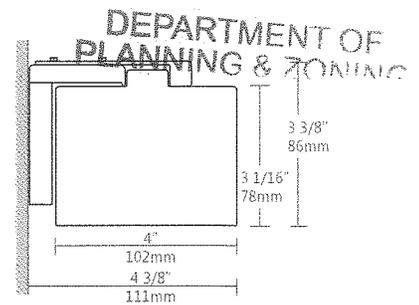
PENDANT



RECESSED



SURFACE



WALL

AUG 28 2014

DEPARTMENT OF
PLANNING & ZONING



Wet Beam brought a sleek and compact Beam luminaire for wet locations to the market. It suits both indoor spaces such as bathrooms, spas, and indoor parking garages as well as outdoor spaces such as under-canopy installations. Like its fluorescent counterpart, the LED version of the Wet Beam complements the Beam LED family. It allows for applications such as the continuation of indoor lines of light in the ceiling to the under-canopy outdoors to maintain a consistent appearance throughout the space.

Maintenance requirements for Wet Beam LED are very low and it allows for significant energy savings. Color rendering with Wet Beam LED is very good and, unlike with fluorescent HID or HPS luminaires, it provides white light under any ambient temperature, allowing notably occupants to feel safer.

MAIN PRODUCT SPECIFICATIONS

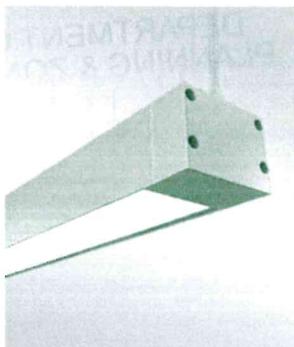
1	PRODUCT ID	2	VERSION	3	NOM. LUMENS/FT	4	COLOUR TEMP.	5	SHIELDING
WBLED	pendant led	B1	B1 (factory preset)	500	500 lm/ft	35	3500 k	F	frosted lens
WBSLED	surface led			700	700 lm/ft	30	3000 k	S	satin lens
WBWLED	wall led			900	900 lm/ft	40	4000 k		
WBRLED	recessed led								

6	LENGTH/FT	7	FINISH	8	VOLTAGE	9	DRIVER
2	2'	AP	aluminum paint	120	120V	D	dimming
3	3'			277	277V		
4	4'			UNV	universal		
5	5'						
8	8'						
S#	System Run						

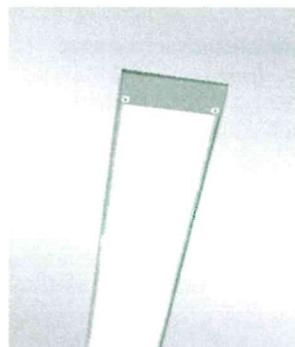


For complete luminaire specification sheets, please visit our web site at www.axislighting.com

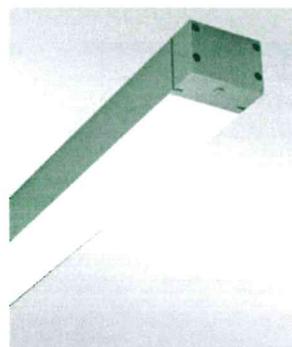
MOUNTING OPTIONS



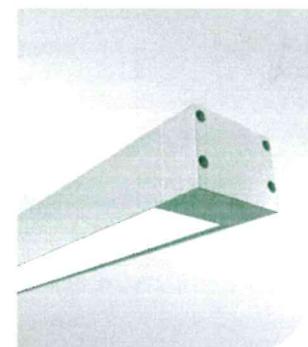
PENDANT



RECESSED



SURFACE



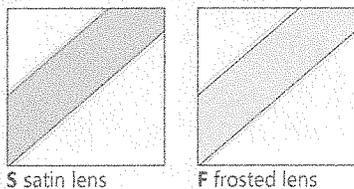
WALL

PERFORMANCE AT 3500K

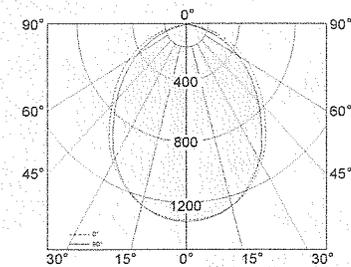
NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
500 lm/ft	6.6w/ft	76 lm/w
750 lm/ft	10.25w/ft	73 lm/w
900 lm/ft	12.8w/ft	70 lm/w

* Based on a 11" luminaire using one driver
Please consult factory for custom lumen output and wattage.

OPTICS OPTIONS



PHOTOMETRICS

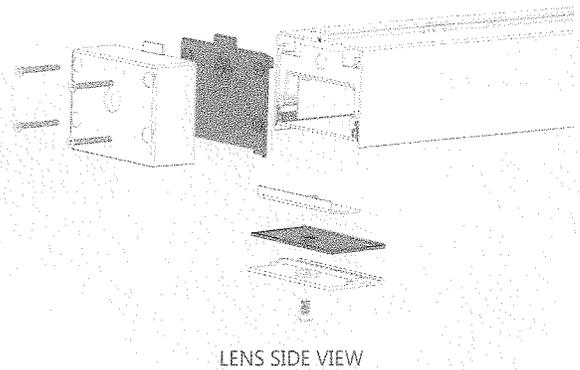


Wet Beam4 LED Direct
Luminaire Lumens: 2999 lm
Input Watts: 10.25 w
Efficacy: 74.9 lm/w
IES FILE: WBLED-B1-750-35.IES

All LED-related data in this document is valid as of Jan. 2013
Given the fast pace of LED developments, up-to-date LED info
is available on our website
at www.axislighting.com.

GASKETED END CAP

With its gasketed end cap and lens the Wet Beam is made for wet locations, it is ideal for exterior soffits and canopies of malls, hospitals and other institutions.



GASKETED END CAP DEPARTMENT OF PLANNING & ZONING

CONSTRUCTION

- Housing** Extruded Aluminum (0.062" nominal)
Up to 70% Recycled Content
- End Cap** Die Cast Zinc (0.070" nominal)
- Interior Brackets** Die Formed Sheet Steel (16 ga)
- Gaskets** Moulded Elastomer (0.100" nominal)
- Lens Gaskets** Extruded Elastomer (0.045" nominal)
- Frosted Lens** Frosted Acrylic 68% transmissive

Fletcher Allen Inpatient Building

Building Light Fixture BB, 4FT

ELECTRICAL

LED	Use of OptimaLED technology based on mid-flux LED
Input Voltage	120V, 277V, UNV.
Driver	Dimming, HiLume, EcoSystem, DALI,
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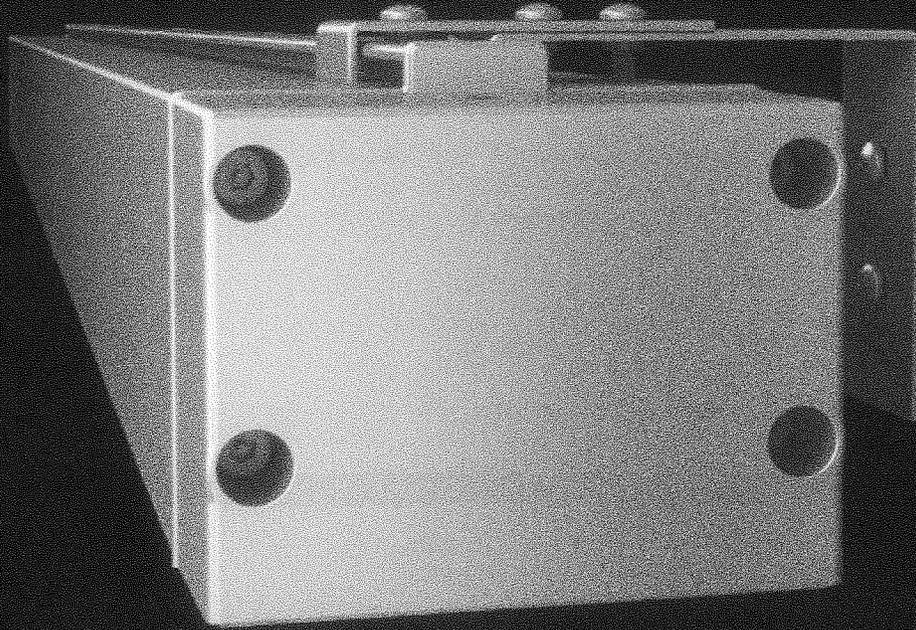
Thermal management

Aluminium housing acting as the heat spreader to maximize life.

Emergency

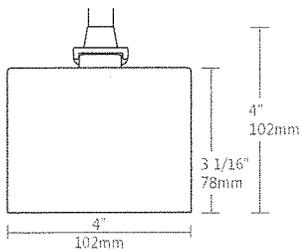
Emergency battery pack or emergency circuit optional.



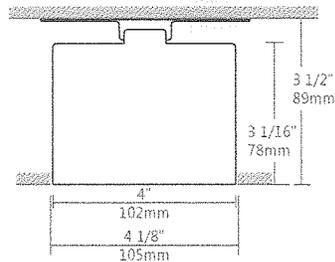


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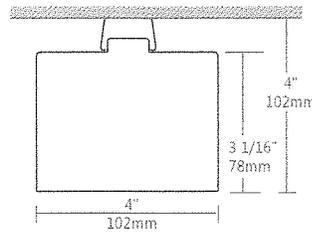
DIMENSIONS



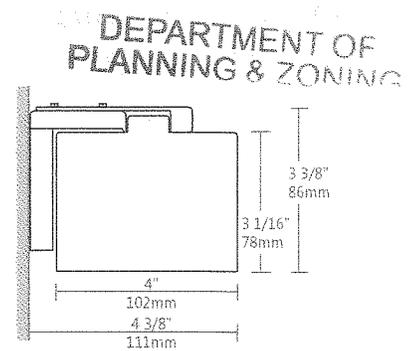
PENDANT



RECESSED



SURFACE



WALL



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MAIN PRODUCT SPECIFICATIONS

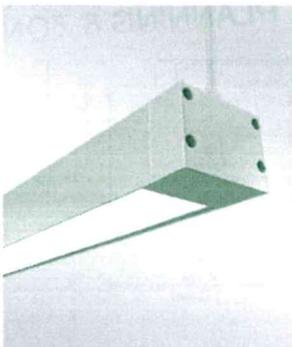
1	PRODUCT ID	2	VERSION	3	NOM. LUMENS/FT	4	COLOUR TEMP.	5	SHIELDING
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WBRLED	recessed led								

6	LENGTH/FT	7	FINISH	8	VOLTAGE	9	DRIVER
2	2'	AP	aluminum paint	120	120V	D	dimming
3	3'	W	white	277	277V	LT	lutron
4	4'	C	custom	UNV	universal		
5	5'						
8	8'						
S#	System Run						

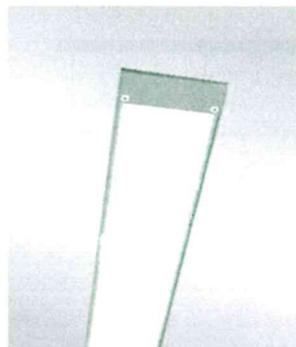


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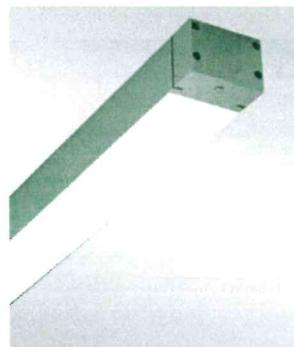
MOUNTING OPTIONS



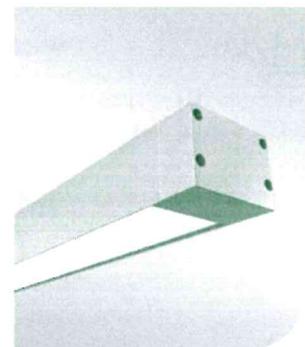
PENDANT



RECESSED



SURFACE



WALL

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 AUG 28 2014

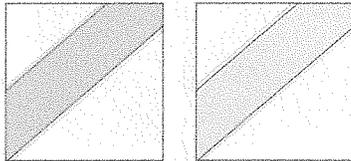
DEPARTMENT OF
 PLANNING & ZONING

PERFORMANCE AT 3500K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
500 lm/ft	6.6w/ft	76 lm/w
750 lm/ft	10.25w/ft	73 lm/w
900 lm/ft	12.8w/ft	70 lm/w

* Based on a 11" luminaire using one driver
 Please consult factory for custom lumen output and wattage.

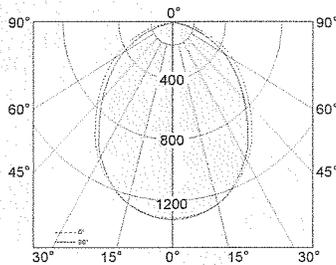
OPTICS OPTIONS



S satin lens

F frosted lens

PHOTOMETRICS

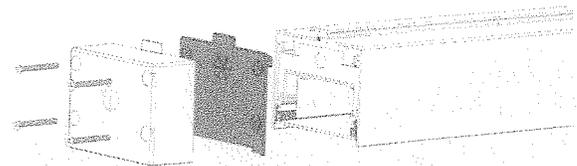


Wet Beam4 LED Direct
 Luminaire Lumens: 2999 lm
 Input Watts: 10.25 w
 Efficacy: 74.9 lm/w
 IES FILE: WBLED-B1-750-35.IES

All LED-related data in this document is valid as of Jan. 2013
 Given the fast pace of LED developments, up-to-date LED info
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GASKETED END CAP

With it's gasketed end cap and lens the Wet Beam is made for wet locations, it is ideal for exterior soffits and canopies of malls, hospitals and other institutions.



LENS SIDE VIEW



GASKETED END CAP

CONSTRUCTION

- Housing** Extruded Aluminum (0.062" nominal)
Up to 70% Recycled Content
- End Cap** Die Cast Zinc (0.070" nominal)
- Interior Brackets** Die Formed Sheet Steel (16 ga)
- Gaskets** Moulded Elastomer (0.100" nominal)
- Lens Gaskets** Extruded Elastomer (0.045" nominal)
- Frosted Lens** Frosted Acrylic 68% transmissive

Fletcher Allen Inpatient Building

Building Light Fixture CC, 8FT

ELECTRICAL

LED	Use of OptimaLED technology based on mid-flux LED
Input Voltage	120V, 277V, UNV.
Driver	Dimming, HiLume, EcoSystem, DALI,
CRI	Minimum 80 color rendering index
CCT	Choice of 3000k, 3500k and 4000k color temperature with a great color consistency (within 3.5-step MacAdam ellipse).
LED life	Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.

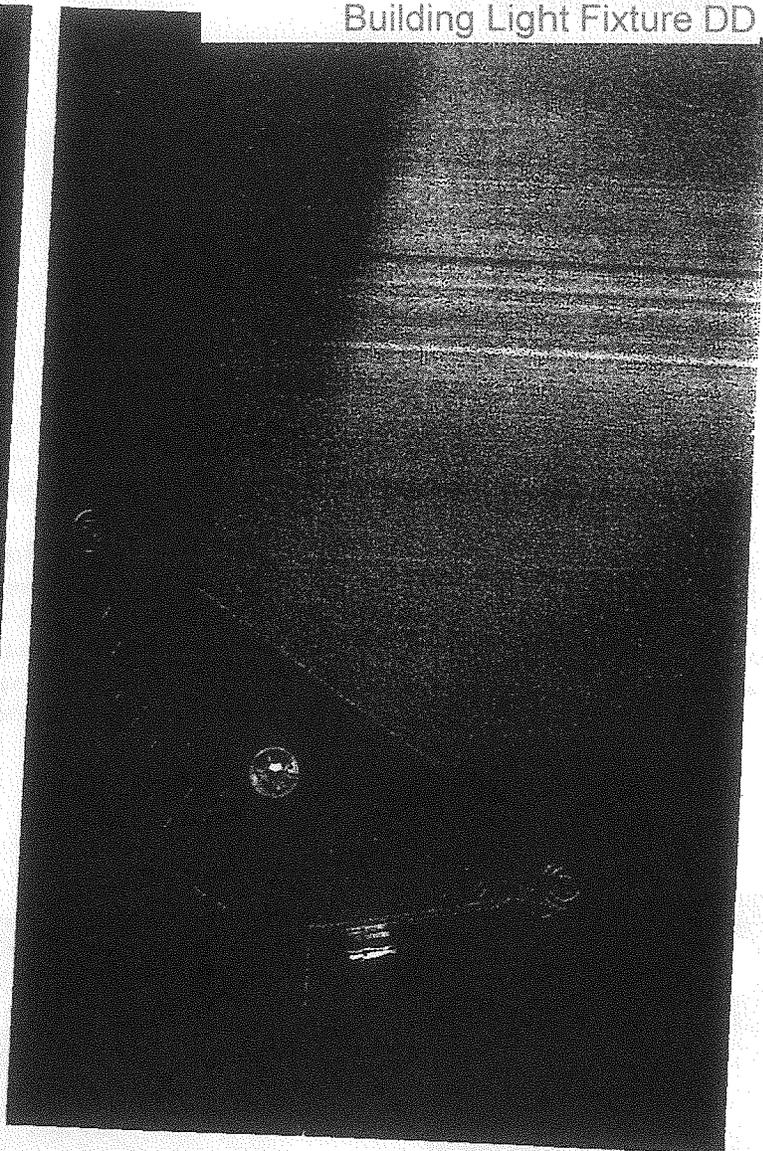
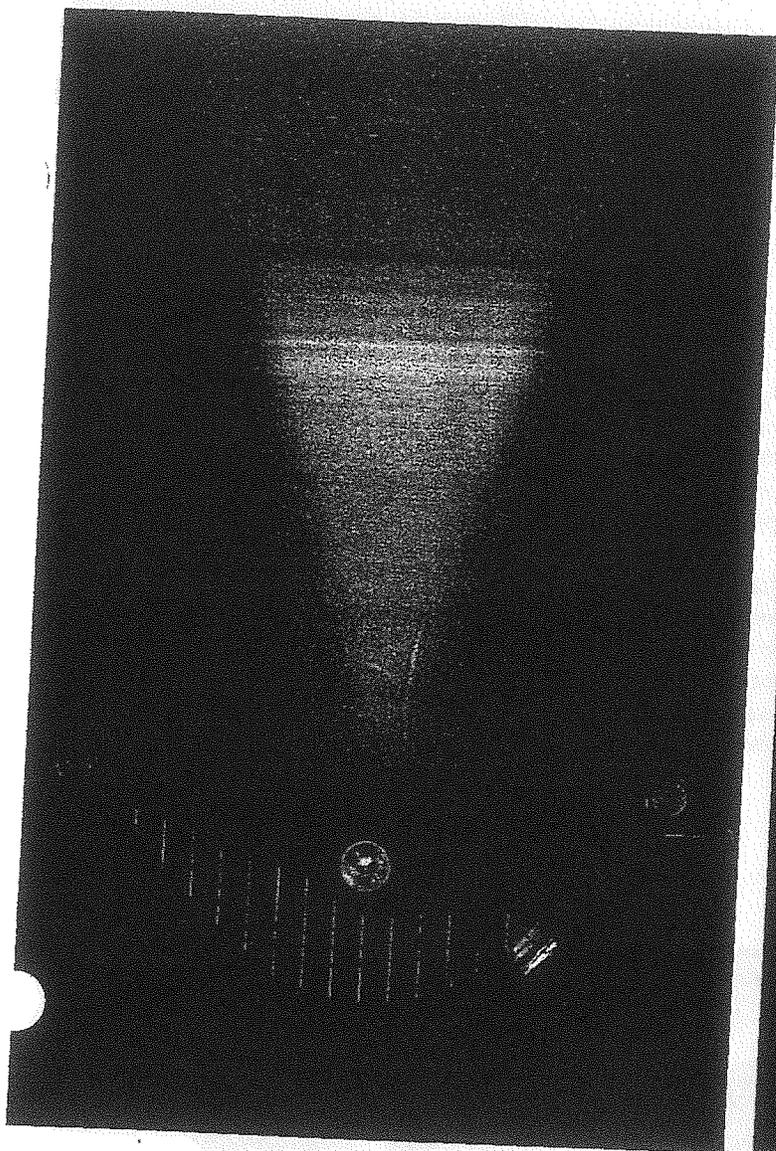
Thermal management

Aluminium housing acting as the heat spreader to maximize life.

Emergency

Emergency battery pack or emergency circuit optional.





Moonshine

High performance
floodlights and spotlights
for discharge lamps

Concept: Roland Jéol
Design: Roy Fleetwood

SIMILAR TO G12,
BUT DOWNLIGHT

TYPE LG6
1290019940
BLACK Finish 277V
* specify Distribution
Note Remote BALLAST

designplan

79 Trenton Avenue
Frenchtown, NJ 08825

Tel: (908) 996-7710
Fax: (908) 996-7042

designplan  MEYER LIGHTING

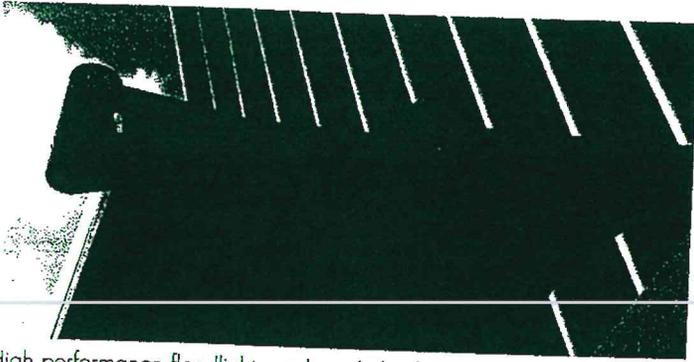
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DEPARTMENT OF
PLANNING & ZONING

Moonshine A

Fletcher Allen Inpatient Building Building Light Fixture DD



High performance floodlights and spotlights for compact fluorescent and Metal Halide. IP65, die cast low copper aluminum housing, all exterior steel parts are stainless steel, axially symmetrical or rotationally symmetrical reflector, tempered glass lens flush with frame, silicon gasket, either remote ballast or recessed ballast box for exterior installation. Recessed ballast box is 8" square to facilitate installation. Fluorescent version has integral electronic -25 F cold weather ballasts.

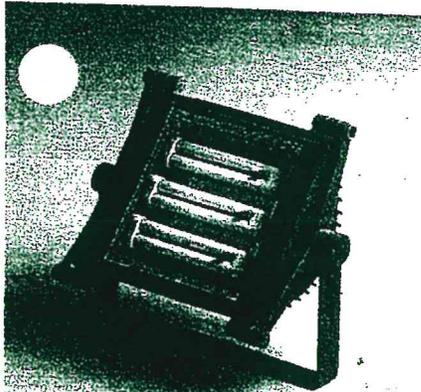
Moonshine is a range of floodlights and spotlights which offers new possibilities for the architectural illumination of buildings. Wide, medium and narrow beam axially symmetrical and rotationally symmetrical are available for the Metal Halide versions. The high IP rating makes them suitable for exterior use, up or down, and for applications in buildings where dust is a problem.

Both sizes of housing take double ended MH lamps. Concentrating on this type of lamp made it possible to design luminaires with a very shallow cross section. When installed horizontally on a

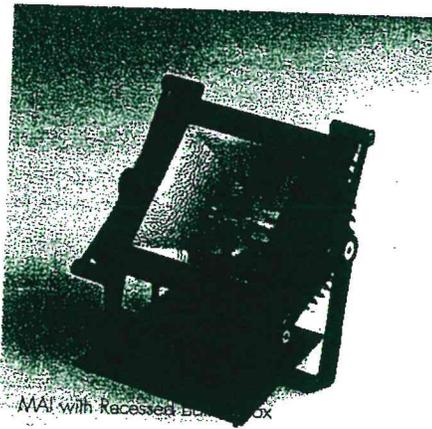
façade, the luminaires only have a minimal effect on the overall appearance of the building.

The 6mm (.236") thick tempered glass is ceramic printed and is flush with the frame. The absence of a lip around the edge makes it more difficult for water and dirt to build up on the glass. This reduces the amount of maintenance.

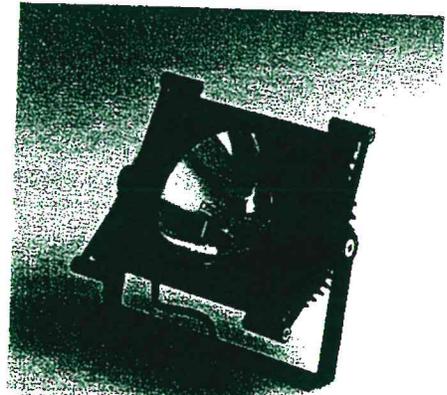
Moonshine is the result of international cooperation between the lighting consultant Roland Jéol and the architect and industrial designer Roy Fleetwood. Both are internationally recognized as being leaders in their field.



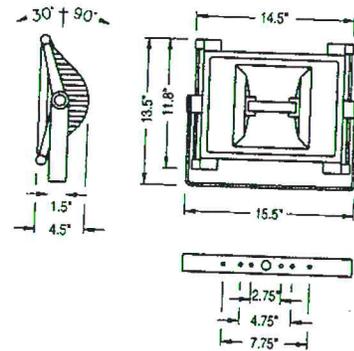
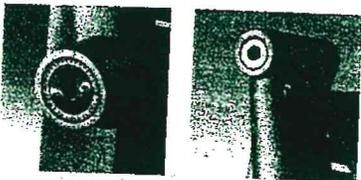
MAF with Integral Ballast



MAF with Recessed Ballast Box



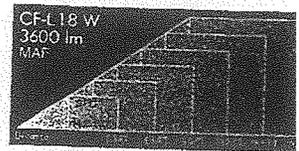
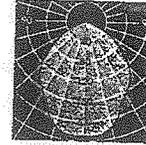
MAF with Remote Ballast



Building Light Fixture DD

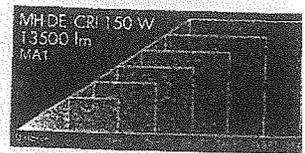
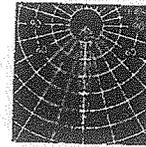
MAF Fluorescent

Lamp	CRI	Socket	Half beam angle	
			C0-180	C90-270
3x18 Dulux L RS	82	2G11	93	100



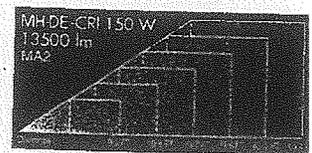
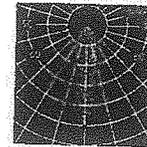
MA1 Axially symmetrical, narrow beam

Lamp	CRI	Socket	Half beam angle	
			C0-180	C90-270
70W MASTER COLOR MH DE 3000K	85	Rx7s	10	73
150W MASTER COLOR MH DE 3000K	85	Rx7s	10	73



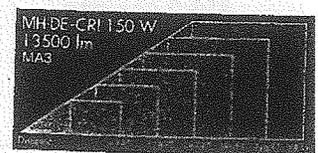
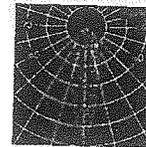
MA2 Axially symmetrical, medium wide beam

Lamp	CRI	Socket	Half beam angle	
			C0-180	C90-270
70W MASTER COLOR MH DE 3000K	85	Rx7s	22	73
150W MASTER COLOR MH DE 3000K	85	Rx7s	22	73



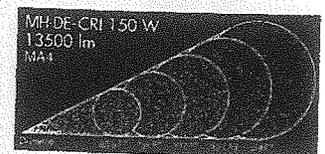
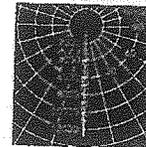
MA3 Axially symmetrical, wide beam

Lamp	CRI	Socket	Half beam angle	
			C0-180	C90-270
70W MASTER COLOR MH DE 3000K	85	Rx7s	40	76
150W MASTER COLOR MH DE 3000K	85	Rx7s	40	76



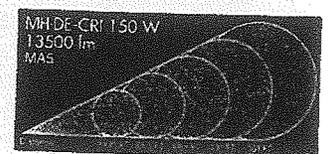
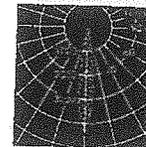
MA4 Rotationally symmetrical, narrow beam

Lamp	CRI	Socket	Half beam angle	
			C0-180	
70W MASTER COLOR MH DE 3000K	85	Rx7s	9	
150W MASTER COLOR MH DE 3000K	85	Rx7s	9	



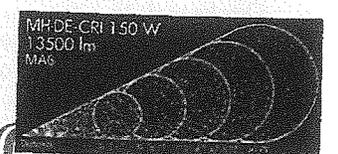
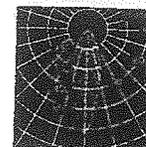
MA5 Rotationally symmetrical, medium wide beam

Lamp	CRI	Socket	Half beam angle	
			C0-180	
70W MASTER COLOR MH DE 3000K	85	Rx7s	20	
150W MASTER COLOR MH DE 3000K	85	Rx7s	20	



MA6 Rotationally symmetrical, wide beam

Lamp	CRI	Socket	Half beam angle	
			C0-180	
70W MASTER COLOR MH DE 3000K	85	Rx7s	45	
150W MASTER COLOR MH DE 3000K	85	Rx7s	45	



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PLANNING & ZONING

ORDERING CHART
moonshine A

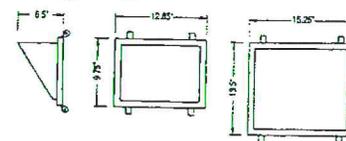
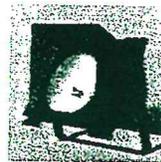
SERIES	Prod. ID XXX	Lamp X	Wattage XX	Body X	Finish XX	Grill X	Ballast X	Lens X	Options XX
Fluorescent	MAF	8 - FLOUR	G8 - 3x18W Blax 4Pin CRI 82 35K	B - Adjustable Floodlight	10 - Matte Silver	0 - None	C - 120V - 277V ELECT	T - Clear Temp Glass	0 - None
Axially Sym Narrow	MA1	9 - HID	L5 - 70W Master Color D/E CRI 85 30K	T - Recessed Ballast Box	78 - Textured Black		9 - 120V MAG HPF		
Axially Sym Medium	MA2		U1 - 150W Master Color D/E CRI 85 30K	Adjustable Floodlight	EW - Euro White		A - 277V MAG HPF		
Axially Sym Wide	MA3				99 - Custom		R - 120V/277V MAG HPF REM		
Rotation Sym Narrow	MA4								
Rotation Sym Med	MA5								
Rotation Sym Wide	MA6								

NOTE: B STYLE BODY IS ALWAYS USED FOR FLUORESCENT WITH INTEGRAL ELECTRONIC BALLAST
B STYLE BODY IS FOR HID WITH REMOTE BALLAST
T STYLE BODY IS ALWAYS INTEGRAL BALLAST IN RECESSED BALLAST BOX

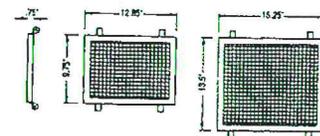
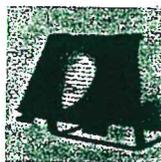
NOTE: FLOUR IS ALWAYS C
HID IS EITHER 9 OR A FOR "T" BODY OR R FOR "B" BODY

Building Light Fixture DD

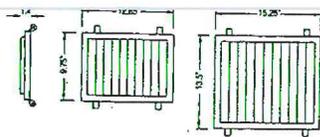
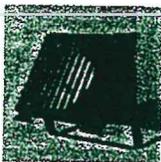
Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 016 940	129 0 036 940	black	cowl
129 0 016 960	129 0 036 950	white	c/w frame
129 0 016 950	129 0 036 960	silver grey	



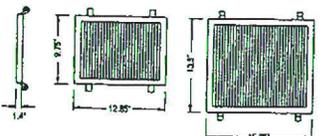
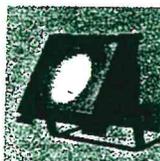
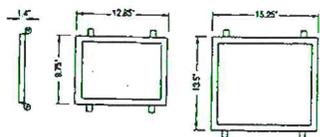
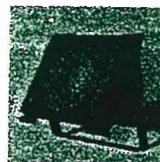
Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 012 940	129 0 032 940	black	protection grill
129 0 012 960	129 0 032 950	white	c/w frame
129 0 012 950	129 0 032 960	silver grey	



Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 014 940	129 0 034 940	black	vertical louvre
129 0 014 960	129 0 034 960	white	c/w frame
129 0 014 950	129 0 034 950	silver grey	
129 0 015 940	129 0 035 940	black	horizontal louvre
129 0 015 960	129 0 035 960	white	c/w frame
129 0 015 950	129 0 035 950	silver grey	



Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 018 940	129 0 038 940	black	green filter
129 0 018 960	129 0 038 960	white	c/w frame
129 0 018 950	129 0 038 950	silver grey	
129 0 013 940	129 0 033 940	black	blue filter
129 0 013 960	129 0 033 960	white	c/w frame
129 0 013 950	129 0 033 950	silver grey	
129 0 017 940	129 0 037 940	black	red filter
129 0 017 960	129 0 037 960	white	c/w frame
129 0 017 950	129 0 037 950	silver grey	
129 0 011 940	129 0 031 940	black	yellow filter
129 0 011 960	129 0 031 960	white	c/w frame
129 0 011 950	129 0 031 950	silver grey	



Only for spotlights with narrow beam light distributions

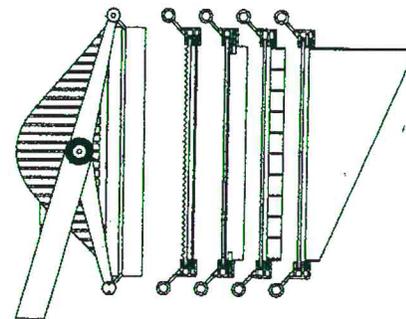
129 0 019 940	129 0 039 940	black	ribbed glass for vertical beam
129 0 019 960	129 0 039 960	white	c/w frame
129 0 019 950	129 0 039 950	silver grey	
129 0 020 940	129 0 040 940	black	ribbed glass for horizontal beam
129 0 020 960	129 0 040 960	white	c/w frame
129 0 020 950	129 0 040 950	silver grey	

The frames can carry a special glass plus another accessory.

Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 051 910*	129 0 071 910*	yellow	filter
129 0 051 930*	129 0 071 930*	blue	
129 0 051 970*	129 0 071 970*	red	
129 0 051 980*	129 0 071 980*	green	

Only for spotlights with narrow beam light distributions

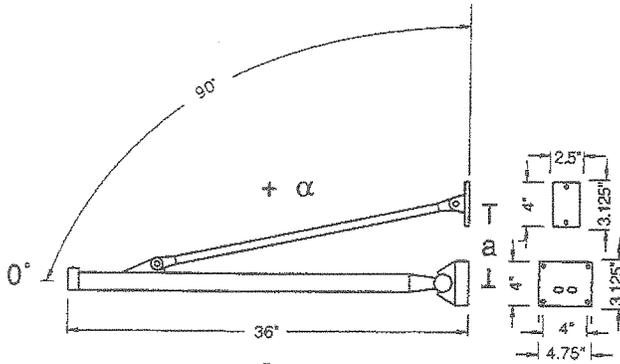
129 0 059 000*	129 0 079 000*	-	ribbed glass, vertical beam
129 0 060 000*	129 0 080 000*	-	ribbed glass, horizontal beam



Accessories such as louvres and special glasses are fitted into a supporting frame and are screwed onto the front of the floodlight. A special glass plus another accessory can be fitted to one frame.

Cantilever Wall Arm for Moonshine Series

The angle of the arm depends on two factors. First the distance between the wall plate and the fixture plate. Second, there is adjustment on the arm itself. So, for example, if the distance from the center of the wall plate to the center of the brace is 10", the arm can go from 18 degrees below horizontal to 9 degrees above horizontal. This represents a spread of 27 degrees.



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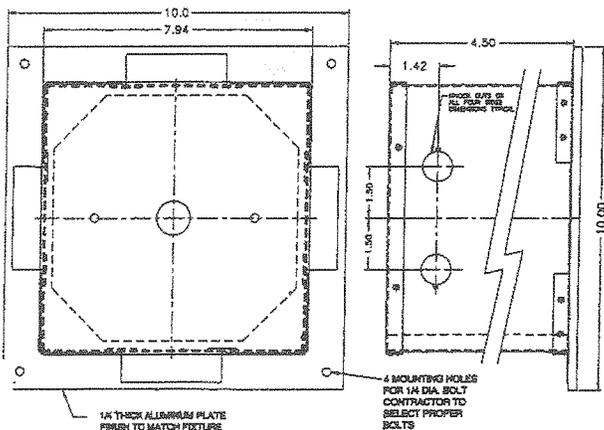
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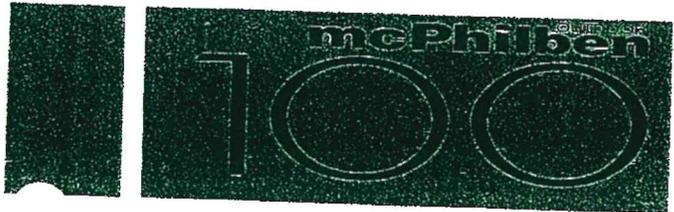
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The interdependence of the installation angle α to distance a

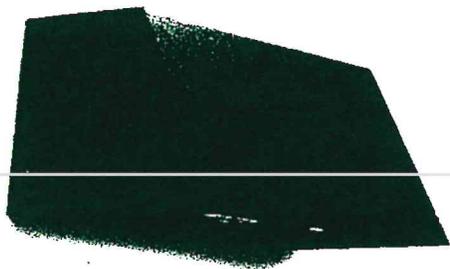
Distance a in inches	Angle α in $^\circ$	Range in $^\circ$
10	-18 - +9	27
12	-18 - +11	29
14	-18 - +13	31
16	-18 - +15	33
18	-18 - +17	35
20	-18 - +19	37
22	-18 - +21	39
24	-18 - +23	41
26	-18 - +25	43
28	+2 - +27	25
30	+14 - +29	15
32	+29 - +31	2
34	+31 - +33	2

Recessed Ballast Box

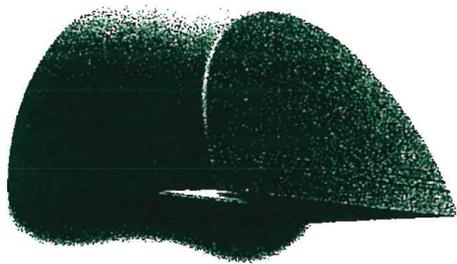




LINE



101 Trapezoidal Sconce



102 Rounded Wedge Sconce

The mcPhilben Outdoor 101 Trapezoidal and 102 Rounded Wedge high performance sconces offer an excellent alternative to unsightly wall mounted fixtures. These architecturally refined luminaires are designed to integrate naturally to wall surfaces. The 101 and 102 luminaires are available with three (3) different distribution patterns - a wide throw, a medium throw and a forward throw. Each luminaire is designed to accept sources up to 175W MH. Housings are sealed throughout, completely excluding moisture, dust, insects and contaminants.

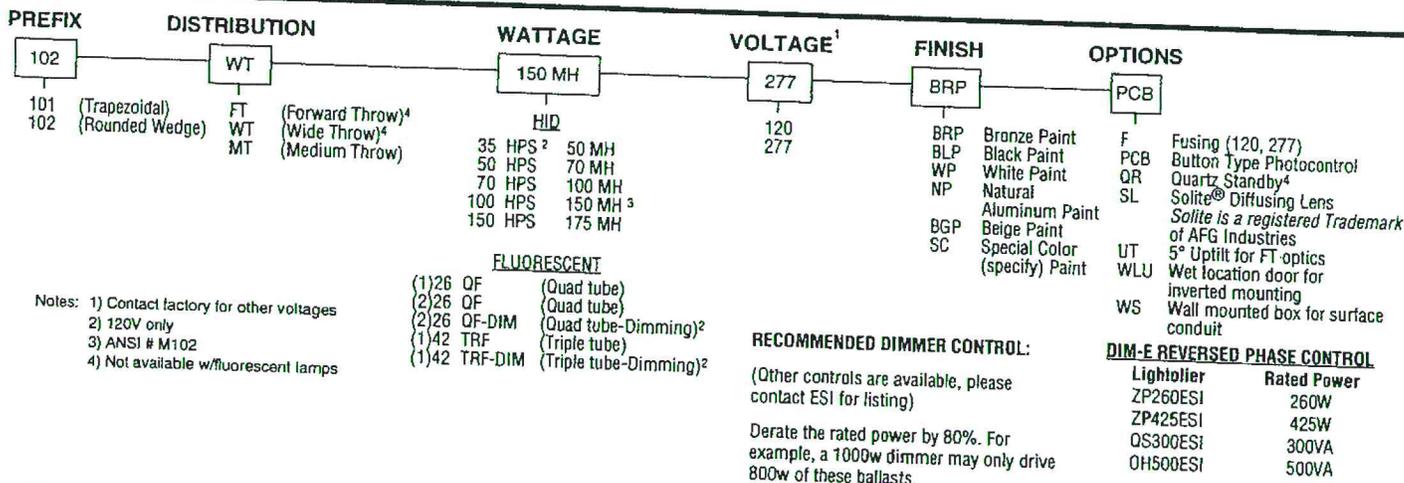
- Wide luminaire spacings from sharp cutoff wall mounted luminaires
- Handsome, compact forms integrate to mounting surfaces
- Rugged die cast aluminum construction

FLETCHER ALLEN HEALTH CTR

Type: LG7 Mfg: GARDCO

102-WT-70MH-277-XXX-SL

ORDERING



mcPhilben Outdoor
2661 Alvarado Street
San Leandro, CA 94577
800/227-0758
510/357-6900 (California)
510/357-3088 FAX
<http://www.mcphilbenoutdoor.com/>

In Canada:
Lumec C&I
640 Curé Boivin Blvd.
Boisbriand
Quebec, Canada J7G 2A7
Tel: 514/430-7040
Fax: 514/430-1453

mcPhilben OUTDOOR

100 LINE

SPECIFICATIONS

GENERAL

Each mcPhilben 100 Line luminaire is a wall mounted cutoff luminaire for high intensity discharge or fluorescent lamps. Internal components are totally enclosed, rain-tight, dust-tight and corrosion resistant. Housing, back plate and door frame are die cast aluminum. A choice of three (3) optical systems are available. Luminaires are suitable for wet locations.

HOUSING

Single piece soft trapezoidal (101) or rounded wedge (102) housings are die cast aluminum. A memory retentive gasket seals the housing with the doorframe to exclude moisture, dust, insects and pollutants from the optical system. A black, die cast ribbed backplate dissipates heat for longer lamp and ballast life.

DOOR FRAME

A single piece die cast aluminum door frame integrates to the housing form. The door frame is hinged closed and secured to the housing with two (2) captive stainless steel fasteners. The heat and impact resistant 1/8" tempered glass lens and one-piece gasket are mechanically secured to the door frame with four (4) galvanized steel retainers.

OPTICAL SYSTEMS

Reflectors are composed of specular extruded and faceted Alzak® components, electro-polished, anodized and sealed. Reflector segments are set in arc tube image duplicating patterns to achieve the wide throw (IES Type II), forward throw (IES Type IV), or medium throw distributions.

ELECTRICAL

Each high power factor HID ballast is the separate component type capable of providing reliable lamp starting to -20°F (-29°C). Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 150°F (65°C) or higher. Standard and dimming fluorescent units have a starting temperature of 0°F (-18°C). Dimming range is 15% to 100%. Standard fluorescent ballasts are solid state. Consult factory for magnetic.

LAMPHOLDER

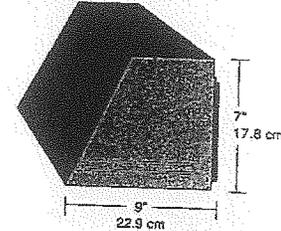
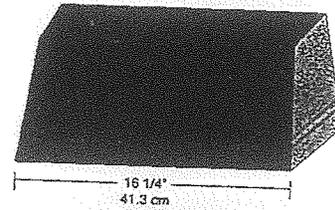
Pulse rated medium base sockets are glazed porcelain with nickel plated screw shell. Fluorescent sockets are high temperature plastic (PBT) with brass contacts.

FINISH

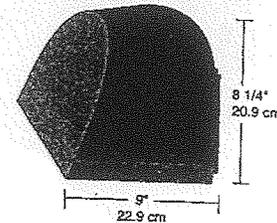
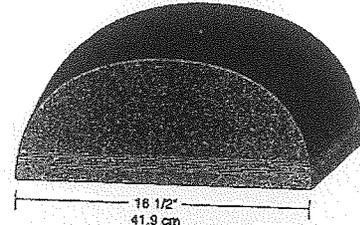
Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, textured polyester powdercoat finish.

LABELS

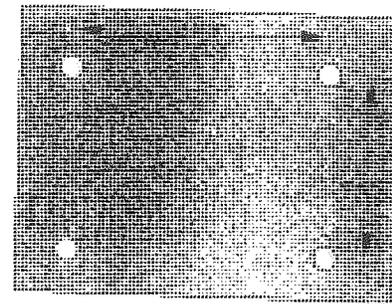
All fixtures bear CSA and UL Wet Location labels.



101 - Trapezoidal Sconce



102 - Rounded Wedge Sconce



Mounting Bolt Pattern

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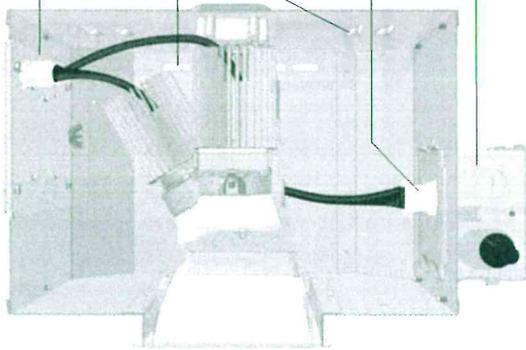
mcPhilben Outdoor
26 Colorado Street
San Leandro, CA 94577
300/227-0758
310/357-6900 (California)
310/357-3088 FAX
<http://www.mcphilbenoutdoor.com/>

In Canada:
Lumec C&I
640 Curé Boivin Blvd.
Boisbriand
Quebec, Canada J7G 2A7
Tel: 514/430-7040
Fax: 514/430-1453

D4216 Medium Beam, 1000 lm, 1300 lm

D1

Electronic Drivers MultiSource® Cover Vent Slot Vent Louvers Plug-In Connectors Branch Circuit Junction Box



Directional Downlight, 4 1/2" x 8 1/2" Rectangular Aperture
Two Xicato Remote Phosphor Modules
Fixed Function, MultiSource® Technology

Optics and Applications

Independent directional systems are designed with locking capability to rotate 180° and angulate 30°. Beam distributions can be changed in the field. Crossing the beams creates interesting effects. Illuminate two different objects from one fixture. Medium beam distribution is standard. See accessories for narrow and wide distribution options.

Design Features - MultiSource® Capable

Fixture housings are designed with MultiSource® plug and play connectors allowing field conversion to other sources. New lighting technologies will be incorporated as they become available. Proprietary passive heat sinks ensure proper temperatures are maintained. Pressure springs assure tight trim to ceiling fit. Service from below only. Maximum ceiling thickness is 7/8".

Modules

Two Xicato remote phosphor modules use high efficiency blue LEDs that convert to white light when directed through a phosphor lens. Lumen packages are 1000 lm and 1300 lm operating on 1A drivers. Standard 3000K, 80 CRI. 2700K, 3500K, 4000K available. Rated Life is 50,000 hours at 70% lumen output.

Dimming Driver

Dimming is standard 0-10V/10%. See accessories for additional dimming options. Specify Voltage.

Finish

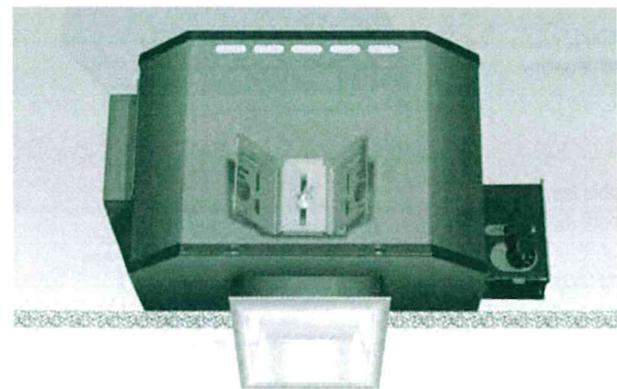
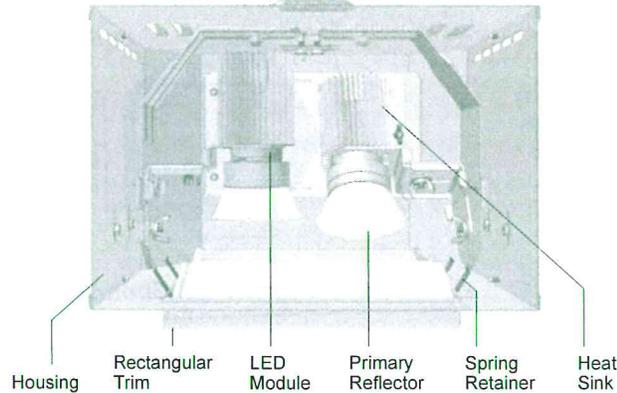
Standard trim is anodized Softglow® clear. Colors available, see accessories. Steel parts are phosphate conditioned then painted matte black to suppress light leaks.

Finish

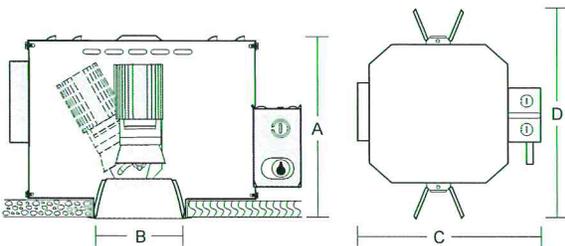
5 year limited. See KV website for manufacturer's details.

General

Fixture is pre-wired and thermally protected, UL and C-UL listed, for damp location and eight wire, 75°C, branch circuit wiring. All products are union made IBEW. Designed and manufactured in the USA.



Dimensions and Sources



Number	A Depth	B Aperture	C Width*	D Length	LED Module
D4216	9 15/16" 252mm	4 1/2" x 8 1/2" 114 x 216mm	16 5/8" 422mm	18 1/4" 464mm	2x1000 lm or 1300 lm Xicato

*For Lutron dimming use 17 5/8".

Energy and Ordering Information

Fixture	Module Lumens	System Lumens	System Watts*	lm/W	Order Code		
					Model	L	K V
D4216	1000	1625 ^Δ	32	50.9	D4216	10	30 12
	1300	1871 [‡]	46	40.7	D4216	13	30 12

Fixture provided standard 3000K with Softglow® clear trim.
 Module lumens: specify 10 for 1000 lm, 13 for 1300 lm.
 Kelvin temperatures: specify 27 for 2700K, 30 for 3000K, 35 for 3500K, 40 for 4000K.
 †Indicates LM-79 Test Data. ‡Indicates KV Test Data.
 *Wattage consumption based on current module series test data.

Accessories

- SB Softglow® black trim.
- SG Softglow® gold trim.
- SH Softglow® mocha trim.
- SP Softglow® graphite trim.
- WT White trim flange.
- R2 26" support rails.
- R5 52" support rails.
- F Fuse.
- SO Fine microprism lens*.
- LL Linear lens*.
- LP Large prism lens*.
- DP Fixed downlight position.
- ND Narrow beam distribution.
- WD Wide beam distribution.
- FMT4 Flush mount, contact factory.
- FLT8 Full lens trim 4 x 8", specify lens type.
- REM Remote Bodine EM. Includes battery pack, charger light, test switch and single lamp operation for 90 minutes. Remote mount only. Ceiling access required.
- D1 Lutron to 1%, 3 wire control.
- DE Lutron EcoSystem to 1%, digital 4 wire.
- AS Xicato Artist Series 95 CRI module for 1000 lm. Contact factory for energy information.
- ST Softglow® titanium trim.
- SW Softglow® wheat trim.
- SY Softglow® pewter trim.
- SZ Softglow® bronze trim.
- WHT White complete cone.
- 27 2700 Kelvin temp.
- 35 3500 Kelvin temp.
- 40 4000 Kelvin temp.
- FR Frosting on lens, specify lens type.
- DCE Double circuiting.

*FLT option required.

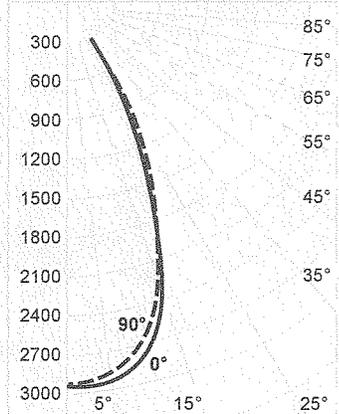


Kurt Versen Company Point Source Lighting
 Westwood, New Jersey 07675

Footcandle Values at Nadir, Fixtures Mounted in 15° Slope

Distance	5'			10'			15'			20'										
	Nadir	10°	15°																	
Lamps	FC	FC	Diam	FC	FC	Diam														
D4216 1000 lm 3000K	118	104	2'	83	3'	30	26	4'	21	5'	13	12	5'	9	8'	7	7	7'	5	11'
D4216 1300 lm 3000K	159	142	2'	115	3'	40	35	4'	29	5'	18	16	5'	13	8'	10	9	7'	7	11'

Candlepower Distribution

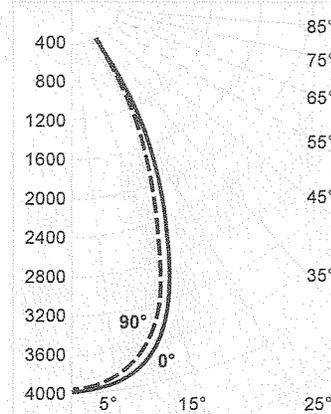


D4216 1000 lm 3000K
LER 50.9 S/M 0° .7
S/M 90° .7

Candelas

°	0°	90°
	0	1625*
5	2958	2958
10	2945	2914
15	2758	2698
20	2340	2267
25	1678	1679
30	836	1130
35	403	593
40	108	253
45	63	107
50	38	25
55	28	15
60	20	10
65	15	7
70	12	4
75	10	3
80	8	3
85	6	3
90	4	2
90	0	0

°Vertical Angles
*Luminaire Lumens



D4216 1300 lm 3000K
LER 40.7 S/M 0° .6
S/M 90° .6

°	0°	90°
	0	1871*
5	3971	3971
10	3928	3843
15	3707	3513
20	3185	2834
25	2179	1958
30	1474	1240
35	1054	536
40	354	244
45	134	73
50	93	23
55	65	13
60	45	9
65	33	4
70	25	1
75	19	0
80	14	0
85	10	0
90	6	0
90	0	0

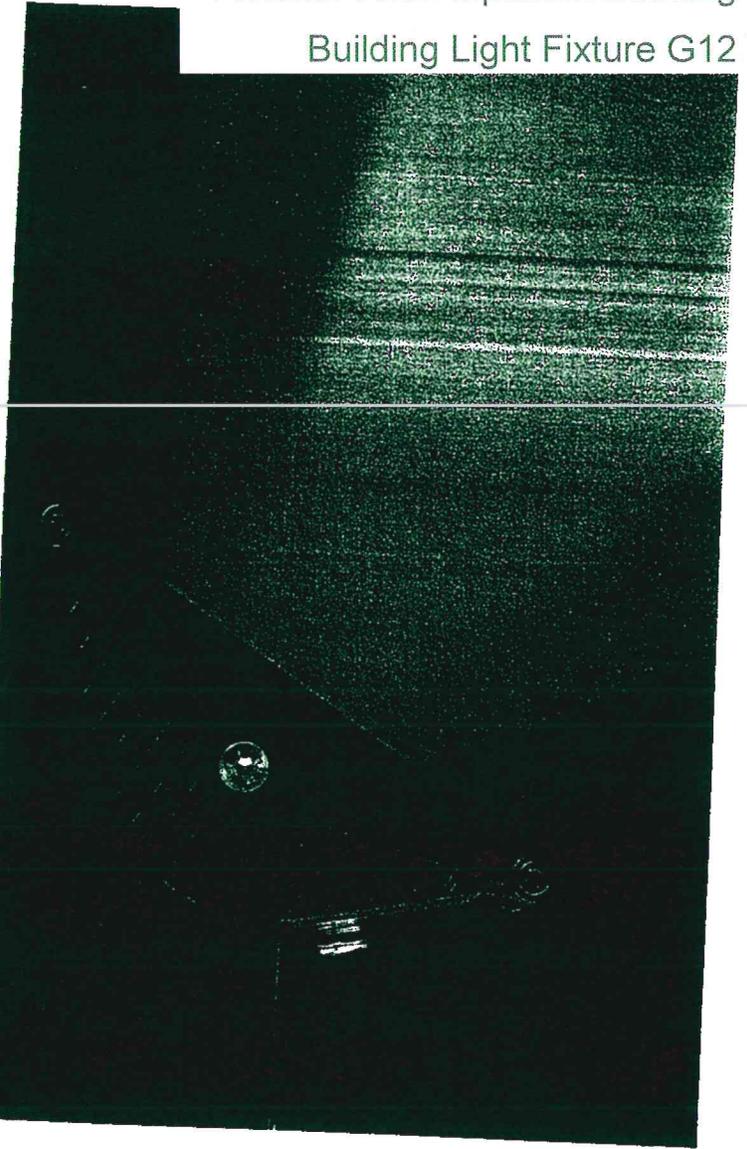
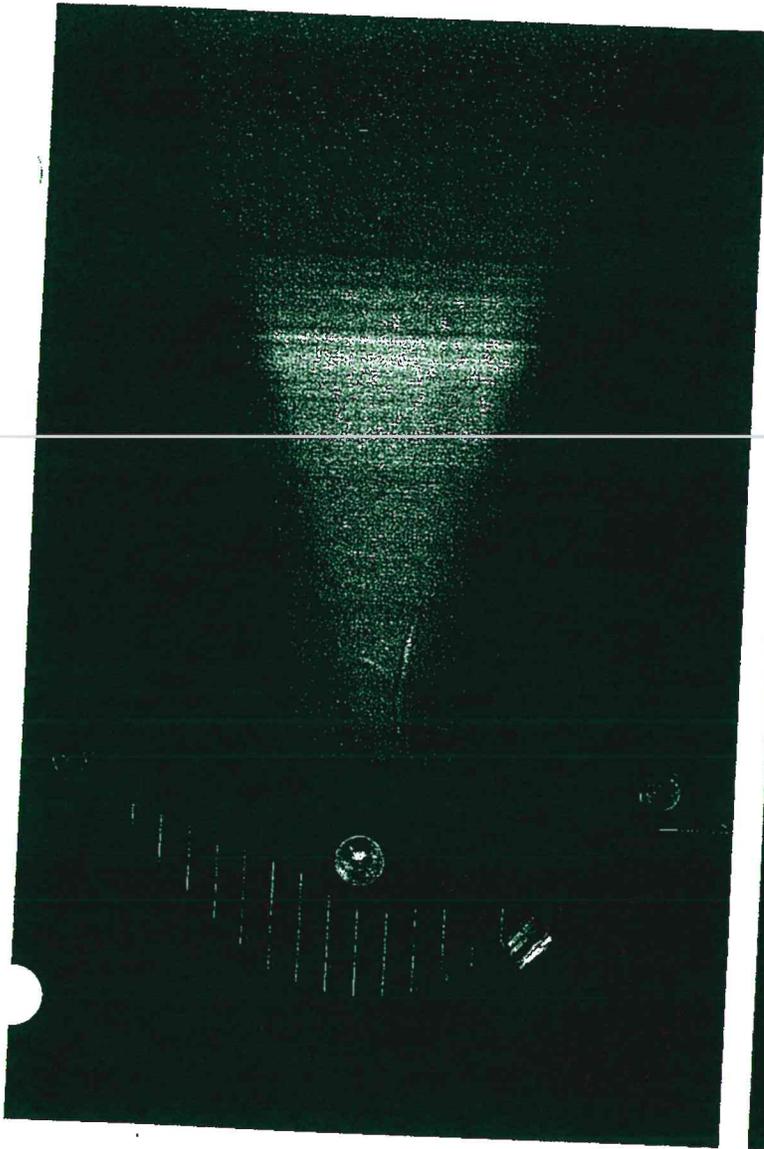
°Vertical Angles
*Luminaire Lumens

Notes

- 1 Photometric Report: D4216 1000 lm KV Report No. 71113-A, D4216 1300 lm LTL Report No. 260910.
- 2 Data with Softglow® trim.
- 3 Colored trim multipliers vary with beam orientation and degree of angulation. Contact the factory for specific data.
- 4 All data derived with fixtures mounted in 15° sloped ceiling.

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Moonshine

High performance
floodlights and spotlights
for discharge lamps

Concept: Roland Jéol
Design: Roy Fleetwood

TYPE LG6

1290019940

BLACK Finish 277V

* specify Distribution

Note Remote BALLAST

designplan 

79 Trenton Avenue
Frenchtown, NJ 08825

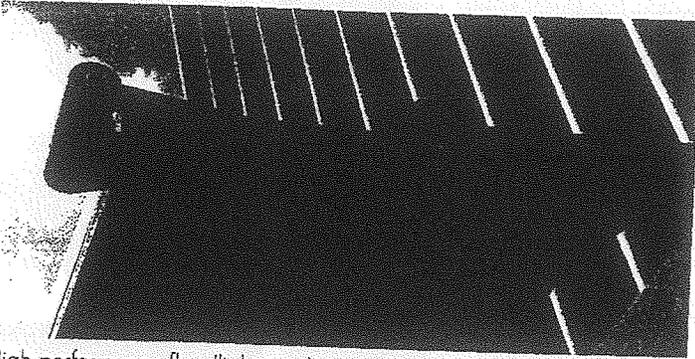
Tel: (908) 996-7710
Fax: (908) 996-7042

designplan  MEYER LIGHTING

Moonshine A

Fletcher Allen Inpatient Building

Building Light Fixture G12



Moonshine is a range of floodlights and spotlights which offers new possibilities for the architectural illumination of buildings. Wide, medium and narrow beam axially symmetrical and rotationally symmetrical are available for the Metal Halide versions. The high IP rating makes them suitable for exterior use, up or down, and for applications in buildings where dust is a problem.

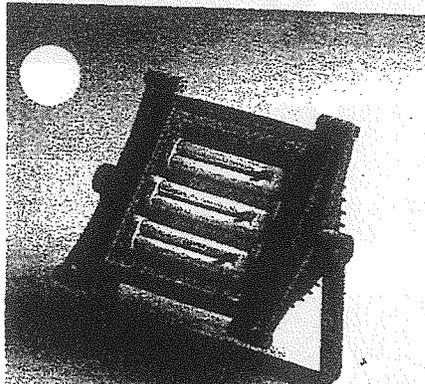
façade, the luminaires only have a minimal effect on the overall appearance of the building.

The 6mm (.236") thick tempered glass is ceramic printed and is flush with the frame. The absence of a lip around the edge makes it more difficult for water and dirt to build up on the glass. This reduces the amount of maintenance.

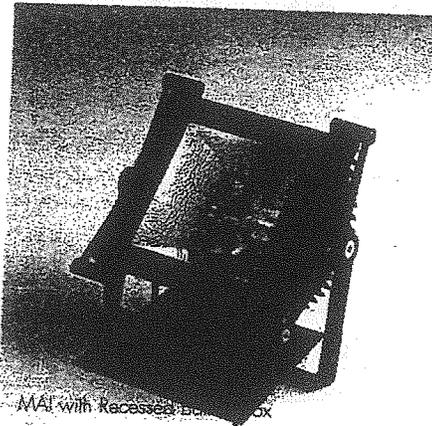
High performance floodlights and spotlights for compact fluorescent and Metal Halide. IP65, die cast low copper aluminum housing, all exterior steel parts are stainless steel, axially symmetrical or rotationally symmetrical reflector, tempered glass lens flush with frame, silicon gasket, either remote ballast or recessed ballast box for exterior integrated gear for HID. Recessed ballast box is 8" square to facilitate installation. Fluorescent version has integral electronic -25 F cold weather ballasts.

Both sizes of housing take double ended MH lamps. Concentrating on this type of lamp made it possible to design luminaires with a very shallow cross section. When installed horizontally on a

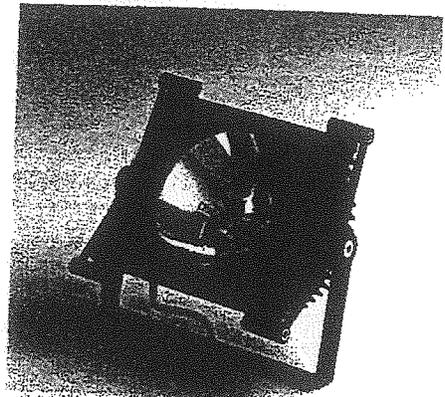
Moonshine is the result of international cooperation between the lighting consultant Roland Jéol and the architect and industrial designer Roy Fleetwood. Both are internationally recognized as being leaders in their field.



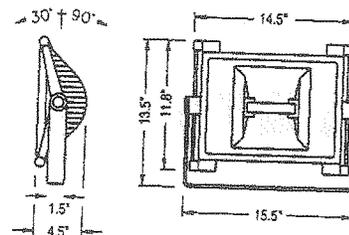
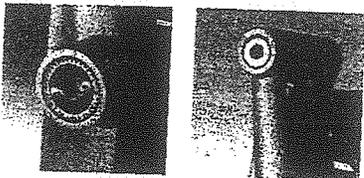
MAI with Integral Ballast



MAI with Recessed Ballast Box



MAI with Remote Ballast



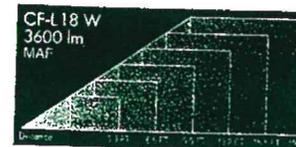
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Building Light Fixture G12

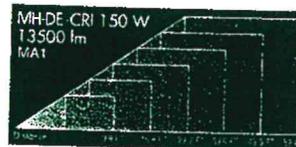
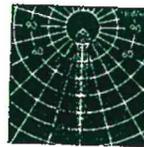
MAF Fluorescent

Lamp	CRI	Socket	Half beam angle	
			CO-180	C90-270
3x18 Dulux L RS	82	2G11	93	100



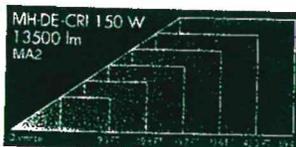
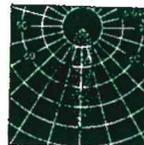
MA1 Axially symmetrical, narrow beam

Lamp	CRI	Socket	Half beam angle	
			CO-180	C90-270
70W MASTER COLOR MH DE 3000K	85	Rx7s	10	73
150W MASTER COLOR MH DE 3000K	85	Rx7s	10	73



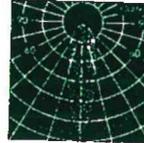
MA2 Axially symmetrical, medium wide beam

Lamp	CRI	Socket	Half beam angle	
			CO-180	C90-270
70W MASTER COLOR MH DE 3000K	85	Rx7s	22	73
150W MASTER COLOR MH DE 3000K	85	Rx7s	22	73



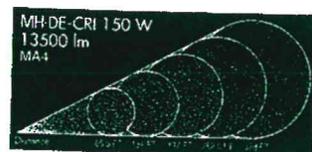
MA3 Axially symmetrical, wide beam

Lamp	CRI	Socket	Half beam angle	
			CO-180	C90-270
70W MASTER COLOR MH DE 3000K	85	Rx7s	40	76
150W MASTER COLOR MH DE 3000K	85	Rx7s	40	76



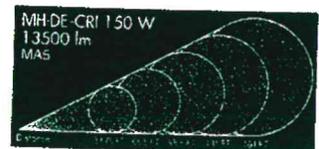
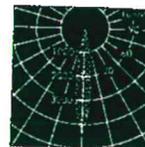
MA4 Rotationally symmetrical, narrow beam

Lamp	CRI	Socket	Half beam angle	
			CO-180	
70W MASTER COLOR MH DE 3000K	85	Rx7s	9	
150W MASTER COLOR MH DE 3000K	85	Rx7s	9	



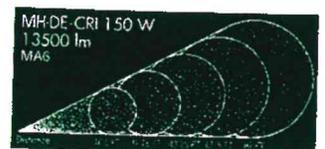
MA5 Rotationally symmetrical, medium wide beam

Lamp	CRI	Socket	Half beam angle	
			CO-180	
70W MASTER COLOR MH DE 3000K	85	Rx7s	20	
150W MASTER COLOR MH DE 3000K	85	Rx7s	20	



MA6 Rotationally symmetrical, wide beam

Lamp	CRI	Socket	Half beam angle	
			CO-180	
70W MASTER COLOR MH DE 3000K	85	Rx7s	45	
150W MASTER COLOR MH DE 3000K	85	Rx7s	45	



ORDERING CHART
moonshine A

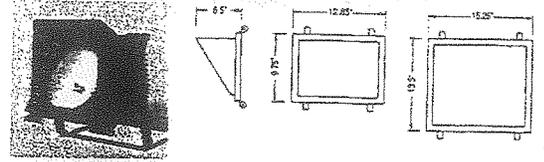
SERIES	Prod. ID XXX	Lamp X	Wattage XX	Body X	Finish XX	Grill X	Ballast X	Lens X	Options XX
Fluorescent	MAF	8 - FLOUR	G6 - 3x18W Biax 4Pin CRI 82 35K	B - Adjustable Floodlight	10 - Matte Silver	0 - None	C - 120V-277V ELECT	T - Clear Temp Glass	0 - None
Axially Sym Narrow	MA1	9 - HID	L5 - 70W Master Color D/E CRI 85 30K	T - Recessed Ballast Box	78 - Textured Black		9 - 120V MAG HPF		
Axially Sym Medium	MA2		U1 - 150W Master Color D/E CRI 85 30K	Adjustable Floodlight	EW - Euro White		A - 277V MAG HPF		
Axially Sym Wide	MA3				99 - Custom		R - 120V/277V MAG HPF REM		
Rotation Sym Narrow	MA4								
Rotation Sym Med	MA5								
Rotation Sym Wide	MA6								

NOTE: B STYLE BODY IS ALWAYS USED FOR FLUORESCENT WITH INTEGRAL ELECTRONIC BALLAST
B STYLE BODY IS FOR HID WITH REMOTE BALLAST
T STYLE BODY IS ALWAYS INTEGRAL BALLAST IN RECESSED BALLAST BOX

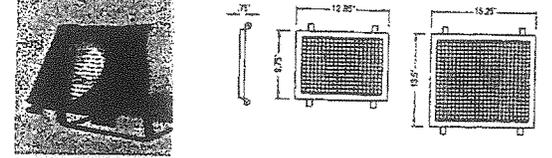
NOTE: FLUOR. IS ALWAYS C
HID IS EITHER 9 OR A FOR "T" BODY OR R FOR "B" BODY

Building Light Fixture G12

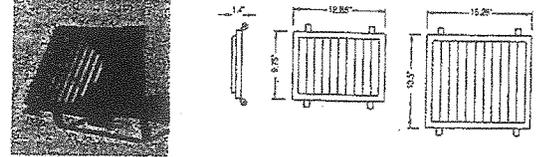
Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 016 940	129 0 036 940	black	cowl
129 0 016 960	129 0 036 950	white	c/w frame
129 0 016 950	129 0 036 960	silver grey	



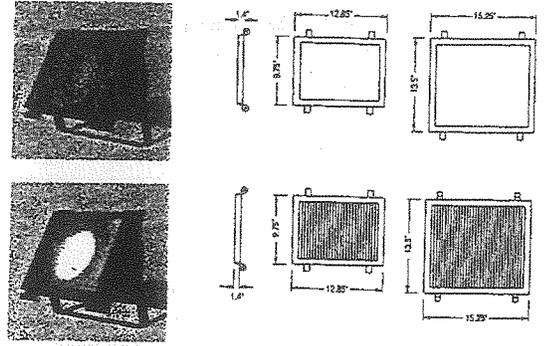
Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 012 940	129 0 032 940	black	protection grill
129 0 012 960	129 0 032 950	white	c/w frame
129 0 012 950	129 0 032 960	silver grey	



Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 014 940	129 0 034 940	black	vertical louvre
129 0 014 960	129 0 034 960	white	c/w frame
129 0 014 950	129 0 034 950	silver grey	
129 0 015 940	129 0 035 940	black	horizontal louvre
129 0 015 960	129 0 035 960	white	c/w frame
129 0 015 950	129 0 035 950	silver grey	



Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 018 940	129 0 038 940	black	green filter
129 0 018 960	129 0 038 960	white	c/w frame
129 0 018 950	129 0 038 950	silver grey	
129 0 013 940	129 0 033 940	black	blue filter
129 0 013 960	129 0 033 960	white	c/w frame
129 0 013 950	129 0 033 950	silver grey	
129 0 017 940	129 0 037 940	black	red filter
129 0 017 960	129 0 037 960	white	c/w frame
129 0 017 950	129 0 037 950	silver grey	
129 0 011 940	129 0 031 940	black	yellow filter
129 0 011 960	129 0 031 960	white	c/w frame
129 0 011 950	129 0 031 950	silver grey	



Only for spotlights with narrow beam light distributions

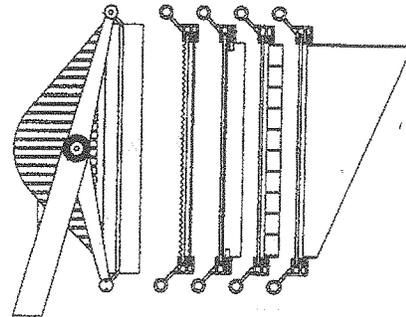
129 0 019 940	129 0 039 940	black	ribbed glass
129 0 019 960	129 0 039 960	white	for vertical beam
129 0 019 950	129 0 039 950	silver grey	c/w frame
129 0 020 940	129 0 040 940	black	ribbed glass
129 0 020 960	129 0 040 960	white	for horizontal beam
129 0 020 950	129 0 040 950	silver grey	c/w frame

The frames can carry a special glass plus another accessory.

Moonshine A		Moonshine B	
Part number	Part number	Colour	Description
129 0 051 910*	129 0 071 910*	yellow	filter
129 0 051 930*	129 0 071 930*	blue	
129 0 051 970*	129 0 071 970*	red	
129 0 051 980*	129 0 071 980*	green	

Only for spotlights with narrow beam light distributions

129 0 059 000*	129 0 079 000*	-	ribbed glass, vertical beam
129 0 060 000*	129 0 080 000*	-	ribbed glass, horizontal beam



Accessories such as louvres and special glasses are fitted into a supporting frame and are screwed onto the front of the floodlight.

A special glass plus other accessory can be fitted into the frame.

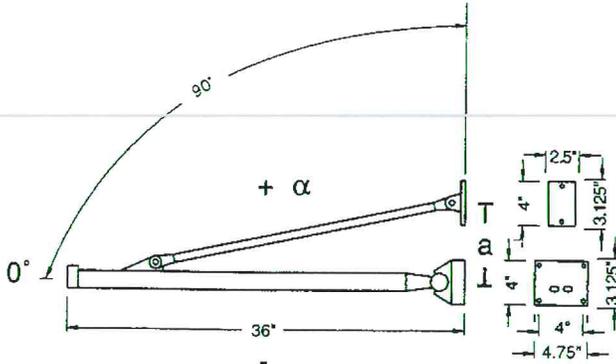
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AUG 28 2014

DEPARTMENT OF PLANNING

Cantilever Wall Arm for Moonshine Series

The angle of the arm depends on two factors. First the distance between the wall plate and the fixture plate. Second, there is adjustment on the arm itself. So, for example, if the distance from the center of the wall plate to the center of the brace is 10", the arm can go from 18 degrees below horizontal to 9 degrees above horizontal. This represents a spread of 27 degrees.



The interdependence of the installation angle α to distance a

Distance a in inches	Angle α in $^\circ$	Range in $^\circ$
10	-18 - +9	27
12	-18 - +11	29
14	-18 - +13	31
16	-18 - +15	33
18	-18 - +17	35
20	-18 - +19	37
22	-18 - +21	39
24	-18 - +23	41
26	-18 - +25	43
28	+2 - +27	25
30	+14 - +29	15
32	+29 - +31	2
34	+31 - +33	2

Recessed Ballast Box

