January 30, 2017

Marisa Smith
Project Manger
Department of Planning and Development Services
County of San Diego
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Re: 3300-10-037, Chinese Bible Church of San Diego
Addendum to Dark Skies and Glare (Photometric Study)

Dear Marisa,

Rock Electric, Inc. authored the Dark Skies and Glare (Photometric Study) for the Chinese Bible Church (project) dated July 27, 2014. Since that time the project description has changed in two respects. 1.) The pre-school has been eliminated. 2.) Solar panels are proposed to provide electricity for the facility. The Dark Skies and Glare (Photometric Study) was reviewed in light of these changes.

- The elimination of the pre-school has no impacts on Dark Skies and Glare because the physical design of the project will not change as a result.
- The use of solar energy would result in the introduction of solar panels to the building rooftop screened behind the parapets. The solar panels have no impacts on Dark Skies and Glare because the solar panels produce no light and would produce no night time glare screened behind the building parapets.

The July 27, 2014 Dark Skies and Glare (Photometric Study), with the information in this addendum, fully address all photometric impact of the project.

Please let me know if you need additional information.

Sincerely,

Rock D. Conaty, President
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DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2014-SPA-14-001,

PDS2010-330010-037(MUP),

LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

Prepared For

Harper Communities, Inc.8110 El Paseo Grande, Ste 105

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Prepared By

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State of California licensed contractor performing the work

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INTRODUCTION AND BACKGROUND INFORMATION

0.1 Dark Skies and Glare Background and Concerns

The night sky is part of our environment. Before the commercialization of the light bulb about 130 years ago the night sky around the world was dark, so dark that the Milky Way could be seen. Now, light has amassed in cities and regions to a point that the artificial lighting of dark night skies (light pollution) has become an environmental issue. Approximately 40 percent of the U.S. population lives where night brightness is too intense for the human eye to use night vision. Two-thirds of Americans cannot see the Milky Way from their backyards and nearly all live in places with measurable light pollution. Dark night skies, for the first time in history, are becoming an extinct phenomenon. Researchers predict that at the current rate of increasing light pollution, by 2025 no dark skies will remain in the continental United States. Outdoor lighting has become a part of our 24-hour modern society and is used to illuminate areas such as roadways, parking lots, private yards, signs, and work sites. Excessive outdoor lighting can brighten our dark skies impacting the community character of rural areas, views of the night sky, ecosystems, and astronomical research. Outdoor lights installed in homes, businesses, street lights and billboards are often too bright and aimed upwards or sideways. The light scatters through the atmosphere above and brightens the night sky, diminishing the view of the stars and other celestial bodies. Unnecessary lighting of the night accounts for excess fossil fuel consumption, which contributes to global warming. The International Dark-Sky Association estimates that one-third of all lighting in the U.S. is wasted, at an annual cost of about 30 million barrels of oil and 8.2 million tons of coal (Bower 2000). The Light Pollution Code (LPC), also known as the Dark Sky Ordinance, was adopted "to minimize light pollution for the enjoyment and use of property and the night environment by the citizens of San Diego County and to protect the Palomar and Mount Laguna observatories from the effects of light pollution that have a detrimental effect on astronomical research by restricting the permitted use of outdoor light fixtures on private property" (Sec. 59.101).

0.2 Light Trespass

Light trespass is a result of spill light shining in undesirable locations, such as a neighbor's backyard or bedroom window. Typical examples include streetlights or floodlights that are not angled or shielded correctly and invade areas on a neighbor's property that are desired to be kept darker. Spill light shining into neighboring homes at night can disrupt sleep patterns and internal cycles in humans. In addition, disturbing natural patterns of light and dark in adjacent habitats influences many aspects of animal behavior and life cycles, and can disrupt whole ecosystems (Harder 2002). Exterior light sources can create light trespass according to type, location, wattage, height, direction of lighting patterns, type of

shielding, when in use, and whether the light is steady or pulsating. The Commission Internationale de l'Eclairage and the LRC compare the effects of higher and lower mounted luminaires as outlined below: Higher mounting heights can often be more effective in controlling spill light, because floodlights with a more controlled light distribution (i.e., narrower beam) may be used, and the floodlights may be aimed in a more downward direction, making it easier to confine the light to the design area. Lower mounting heights increase the spill light beyond the property boundaries. To illuminate the space satisfactorily, it is often necessary to use floodlights with a broader beam and to aim the floodlights in directions closer to the horizontal than would occur when using higher mounting heights. Lower mounting heights make bright parts of the floodlights more visible from positions outside the property boundary, which can increase glare.

0.3 Dark Skies and Glare Explanation

These Guidelines for Determining Significance for Dark Skies and Glare is used by County staff for the review of discretionary projects and environmental documents pursuant to the California Environmental Quality Act (CEQA). These Guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. Normally, (in the absence of substantial evidence to the contrary), non-compliance with a particular standard stated in these Guidelines will mean the project will result in a significant effect, whereas compliance will normally mean the effect will be determined to be "less than significant." Section 15064(b) of the State CEQA Guidelines states:

"The determination whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on factual and scientific data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

The intent of these Guidelines is to provide a consistent, objective and predictable evaluation of significant effects. These Guidelines are not binding on any decision- maker and do not substitute for the use of independent judgment to determine significance or the evaluation of evidence in the record. The County reserves the right to modify these Guidelines in the event of scientific discovery or alterations in factual data that may alter the common application of a Guideline.

0.4 Purpose of Study

This report for Dark Skies and Glare is prepared for a discretionary project that is being processed by the Land Use and Environment Group. This report has been prepared consistent with the Guidelines for Determining Significance Dark Skies and Glare of the County of San Diego, Land Use and Environment Group, Department of Planning and Land Use and Department of Public Works dated July 30, 2007 and modified January 15, 2009. This photometric study is prepared to assist the County fulfill the following purposes of the guidelines:

- Ensure the quality, accuracy and completeness of the report and, particularly, photometric studies.
- Aid in staff's efficient and consistent review of maps and documents from different consultants.
- Provide adequate information to make appropriate planning decisions and to make determinations regarding conformance with applicable regulations and policies.
- Increase the efficiency of the review process and avoid unnecessary time delays.

This photometric study is prepared to determine whether the proposed project meets the Guidelines listed in Section 4 of the Guidelines Determining Significance – Dark Skies and Glare.

Chapter 1 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Project Description

The proposed project, the Chinese Bible Church of San Diego, consists of the construction of a multiple-use religious facility. The project will include five buildings including a Sanctuary and Administration Building, a Fellowship Hall, a Religious Meeting Building, a Christian Education Building, and Fellowship Learning Center Building.

According to the latest Project Description provided by the applicant, the normal operating hours of the church are as follows:

The normal operating hours of the church are as follows:

1. Weekdays 8:00 am to 6:00 pm

a. Fellowship, Recreation, and normal church related activities (10 am to 3 pm)

b. Church Café and Bible Bookstore (9 am to 6 pm)

c. Pastoral Offices (8 am to 6 pm)

d. Preschool/Kindergarten (8:30 am to 3 pm. Phase I up to 50 children. Build out will have a capacity of 150 kindergarteners or preschoolers.)

2. Weekdays 6:00 pm to 10:00 pm

a. Worship, Prayer, Bible Study and normal church related activities (6:00 pm to 10:00 pm)

b. Recreation Fellowship (6:00 pm to 10:00 pm)

c. Church Café and Bible Bookstore (6:00 pm to 10:00 pm)

3. Weekends

a. Worship, Bible Study, Prayer and normal church related activities (6:00 pm to 10:00 pm)

b. Recreation Fellowship (8 am to 10 pm)

c. Main Worship (Sunday 9 am to 10:10 am, 10:45 am to 12:00 pm, 12:30 pm to 1:45pm.)

d. Church Café and Bible Bookstore (9 am to 10:00 pm)

4. Special Nighttime Activities are held by the church occasionally which include prayer meetings, youth lock-ins and other normal church related meetings. These special nighttime activities will be held indoors to reduce noise and lighting in order to comply with the County standards by using minimal outdoor lighting as needed for security and holding these church related activities indoors between the hours of 10:00 pm and 8:30 am.

5. Note: These operating hours are for normal Church related activities but may be adjust over time to meet the changing needs of the congregation. Allow normal added time for participant arrival and departure from events. Allow additional time for staff and volunteer preparation, setup and teardown before and after each event, as needed.

1.2 Project Location and Setting

The project site is located at 16919 Four Gee Road in an unincorporated area of the County of San Diego. The project site is located on an irregular shaped lot (Assessor's Parcel Number [APN] 678-060-27-00) is located in the county of San Diego, California, in the SE ¼ of the SE ¼ of Section 19, Township 13 South, Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute topographical map, Escondido & Rancho Santa Fe quadrangles (USGS 1994). Generally, the project site is located west of Interstate 15 (I-15), north of Camino del Sur, and east of 4 Gee Road. The project site is within the Santa Fe Valley Specific Plan (SFVSP) Area, in the San Dieguito Community Plan Area (CPA). The site is north of the City of San Diego Future Urbanizing Area (Black Mountain Ranch [BMR]), south of the Del Dios Highway and Lake Hodges, and West of the 4S Ranch Specific Plan. Access would be provided via Four Gee Rd. and a new road called Grace Way. The site is an oddly shaped quadrangle comprising four residential parcels. Within the immediate vicinity, there is residential development to the south and east, agricultural land to the west, and an open space wetland preserve to the north. The topography of the project site consists of a low hill on the western half of the site. A drainage that gently slopes to the east and north occupies the eastern half of the site. Elevations on the property range between approximately 490 feet above mean sea level (AMSL) and 620 feet AMSL. A large, unnamed east–west-trending marshy drainage runs along the northern edge of the property. This drainage eventually connects to the San Dieguito River approximately 1.7 miles to the north–northwest. The hill is occupied by two houses and two garages, with scattered ornamental landscaping. The small, north–south-trending drainage is under cultivation with strawberries.

Chapter 2 LIGHTING SCHEDULE

Attachment D Site Lighting Schedule and Specifications

A list of site lighting fixtures descriptions including the manufacturer, model, type, image, Dark Sky and Title 24 compliant notes, shielding and angle requirements, bulb, lumens, wattage and height,.

Detailed Light Fixture Specification Sheets are also attached as follows:

Attachment G	Lithonia – LED Parking Lot Lighting Full Cutoff Fixture
Attachment H	all Mounted Full and Double Pole Mounted LED Full Cut Off Fixture by Lithonia

Chapter 3 PHOTOMETRIC ANALYSIS

3.1 Four site plans are provided to accomplish the Photometric Analysis (Plot Plans)

Attachment A	Project Site Plan (sheet A2)
Attachment B	Lighting Site Plan (sheet A3)
Attachment C	Parking Lot Lighting Levels Site Plan
Attachment J	Aerial Map of Surrounding Uses

3.2 These plot plans meet the requirements for County's Guidelines as follows:

- Drawn to engineers scale with a north arrow; (Attachment A)
- Clearly identify all property lines; (Attachment A)
- Identify immediate offsite uses and if available, the location of off-site structures;(Attachment J)
- Identify all onsite structures and parking areas; (Attachment A)
- Identify the location of all onsite lighting fixtures; and (Attachment B)
- Photometric overlay that identifies the spill light. The photometric data should encompass the whole area to be illuminated, including extending onto adjacent property. Enough data should be presented to show that light trespass onto adjacent property will not be an issue, and that all parking areas are adequately illuminated. (Attachment C)

4.1 This report analyzes the project using the guidelines in Section 4 of the County's Guidelines for Determining Significance for Dark Skies and Glare. The report will describe the rationale used to determine if the impact is significant or less than significant for each question. Following the analysis and rationale for each question, the report will clearly state whether the impact is considered significant or less than significant. If significant, the report will provide mitigation measures that would reduce the impact to less than significant.

4.2 Guidelines for Determining Significance

The following significance guidelines were used for the evaluation of whether a significant impact to dark skies or from glare will occur as a result of project implementation. The project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if the project does not propose any of the following, it will generally not be considered to have a significant effect on dark skies or from glare, absent specific evidence of such an effect:

1. The project will install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.

2. The project will operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.

3. The project will generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property.

4. The project will install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color, that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties.

5. The project does not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code.

The first and second significance guidelines, which rely on the lamp and shielding requirements and hours of operation standards established in the LPC, have been determined to effectively reduce impacts on dark skies. The standards are the result of a collaborative effort from technical lighting experts, astronomers, and County staff to effectively address and minimize the impact of light pollution on dark skies. The standards were developed in cooperation with lighting engineers, astronomers, SDG&E, Palomar and Mount Laguna observatories, San Diego County Department of Planning and Land Use and Department of Public Works, and local community planning and sponsor groups. The LPC was written specifically to ensure that new outdoor lighting would have minimal impacts on astronomical observatories.

The third significance guideline relies on the light trespass restriction specified in the County Zoning Ordinance to effectively reduce impacts on dark skies. It also aims at reducing or eliminating light trespass into neighbors' yards and windows and/or into adjacent habitats. As with the LPC, the light trespass requirements are the result of a collaborative effort from technical lighting experts, astronomers, and County staff to effectively address and minimize the impact of light pollution on adjacent properties. It should be noted that there is always some level of naturally occurring nighttime illuminance. For instance the typical illuminance from moonlight is 0.03 foot-candles. Coupled with artificial lighting in our 24-hour society nighttime illuminance is typically higher than the natural occurring prevalent level, especially in urban and suburban areas. Therefore, a project that will directly illuminate adjacent properties and contribute to a level of light trespass in excess of established foot-candles will generally result in a potentially significant impact. As specified in the Zoning Ordinance, the property line, as opposed to structures, has been chosen as the point where light trespass or unwanted light may affect a neighbor.

These provisions of the Zoning Ordinance were adopted specifically to ensure that new outdoor lighting would have minimal impacts on neighboring properties. The fourth significance guideline minimizes unnecessary daytime glare impacts to motorists, cyclists, pedestrians or individuals from reflected sunlight. With today's advances in engineering, non-reflective building materials can be used to minimize glare. Any new structure that uses highly reflective building materials may result in glare impacts and this should not occur. It should be noted that conformance to the LPC (Guidelines 1 and 2) also limits nighttime glare from outdoor lighting and nonconformances may result in glare impacts too.

This fifth significance guideline directs consideration of the project's compliance with all applicable Federal, State and local statutes and regulations including the San Diego County Light Pollution Code or any other statute or regulation that may be applicable and has not been listed in this document. If such other statute or regulation is identified, the significance of the project's failure to conform to it would depend upon factors such as the purpose of the regulation or statute and the degree of the project's failure to conform to it.

This Photometric Study will assess the project's adverse effects or to determine the significance of the adverse effects relative to the Guidelines presented above.

4.3 Project Site Lighting Observations and Evaluation

This report has following observations and evaluations based on the significance guidelines listed above based on Section 4 of the County's Guidelines for Determining Significance for Dark Skies and Glare:

1. The project will install outdoor light fixtures that conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code. All of the fixtures shown on the Lighting Site Plan (Attachment B) are designed with shielding provided by the manufacturer. All site lighting fixtures, noted to have shielding placed on site during installation as needed to avoid light trespass to the adjacent properties (Attachments Band D). The project site lighting effects for this guideline criteria is determined to be "less than significant"

2. The church's operating hours shown above determine that the project will not operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.). The project site lighting effects for this guideline criteria is determined to be "less than significant"

3. The project will not generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property. All site lighting fixtures are noted to have shielding placed on site during installation as needed to avoid light trespass to the adjacent properties (Attachments Band D). Although some potential light spillage is observed on the Parking Lot Lighting Levels Site Plan (Attachments C) the noted shielding to be placed on site when the fixtures are installed will eliminate potential any light spill on to adjacent properties to any significant level. The project site lighting effects for this guideline criteria is determined to be "less than significant"

4. The project will not install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color, that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties. The Project Building Elevations show standard earth tone stucco walls with mission tile roofing similar to the surrounding area structures and will not reflect light to have any negative impact on the neighborhood. The project site lighting effects for this guideline criteria is determined to be "less than significant"

5. The project does conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code. The project outdoor lighting also conforms to Title 24 CA Energy code (See notes on Attachment C "Parking Lot

Lighting Levels Site Plan" and Attachment D "Site Lighting Schedule and Specifications"). Title 24 conforming features include appropriate wattages, automatic controls and cut-off fixture angling. The Project is proposing LED lighting fixtures which will decrease the lighting to an acceptable level below 4050 lumens per SEC. 59.106 Requirement for Lamp Source and Shielding. The use of these state of the art LED fixtures can assist the project meeting LEED criteria as opposed to the low pressure sodium will not meet the LEED requirements for lighting. Based on observation of the project plans and description the project will conform to all governmental requirements related to dark skies or glare and the project will conform to the San Diego County Light Pollution Code.

4.4 MITIGATION AND PROJECT DESIGN CONSIDERATIONS

Using the guidelines in Section 4 of the County's Guidelines for Determining Significance for Dark Skies and Glare and analyzing the proposed project documents related to site lighting, this project will conform to the to the San Diego County Light Pollution Code and any effects based on this guideline criteria is determined to be "less than significant" therefore no mitigation is required for this project.

Although no mitigation is required for this project, the following section is not required but may be considered by project designers as possible improvements related to site lighting for any project design.

The following section provides a list of standard mitigation and project design considerations that may reduce the potentially impacts of new light sources on daytime and nighttime views, including skyglow, light trespass and glare. Most of the considerations mentioned below tie directly to requirements specified in the LPC and/or Zoning Ordinance.

4.5 Skyglow

As explained by the Institution of Lighting Engineers (ILE) the most significant factors that contribute to skyglow are "light output and lamp spectral characteristics, light distribution from the luminaire, reflected light from the ground, and aerosol particle distribution in the atmosphere." Therefore, if the light entering the night sky can be reduced, skyglow can be mitigated. The following list provides types of standard mitigation and project design considerations that can reduce skyglow:

• Use full cutoff luminaries, as defined by the Illuminating Engineering Society of North America (IESNA), to minimize the amount of light emitted upward directly from the luminaire. A fully shielded outdoor light ensures that light rays emitted from the fixture are projected below the horizontal plane passing through the lowest point on the fixture from which the light is emitted (LPC Section 59.105).

• Restrict the hours of operation of outdoor lighting to hours of active use (LPC Section 59.107 and ZO Section 6322).

• Require low-pressure sodium light sources, which allow astronomers to filter the line spectra from telescopic images (LPC Section 59.105).

• Condition new development projects to prohibit the post-construction addition of outdoor lighting that was not included in the proposed project.

4.6 Light Trespass

To minimize light trespass the following types of mitigation and project design considerations can be used, as suggested by the IESNA:

• Select luminaires that control the intensity (candela) distribution (LPC Section 59.105).

• Use well-shielded luminaires (LPC Section 59.105).

• Keep floodlight angles aimed low enabling the entire beam to fall within the intended area to be lit.

Glare

To minimize glare the following types of mitigation and project design considerations can be used, as suggested by the IESNA:

• Use full cutoff and semi-cutoff lighting. Cutoff designations limit the intensity values in the glare zone and provide shielding (ZO Section 6324).

• Adjust mounting height to reduce spill light (ZO Section 6324).

• Focus exterior illumination, including floodlights and spotlights, downward and into the project site. A combination of shielding, screening, and directing the lighting away from off-site areas shall be used to minimize “spill-over” effects onto off-site roadways, properties and open space areas.

• Use landscaping to serve as filtering devices to soften the impact of direct exterior, reflected exterior, and building interior lighting.

• Limit signs with flashing, mechanical, strobe, blinking lights, moving parts, or lighted monument signs.

• Restrict the hours of operation of outdoor lighting to hours of active use (LPC

See Section 59.107 and ZO Section 6322).

• Use low-level pedestrian lighting (e.g. bollards) on the site for pedestrian pathways.

• Use lowest intensity project lighting necessary for security and safety purposes while still adhering to the recommended levels of the IESNA.

Attachment A

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ),

PDS2014-SPA-14-001, PDS2010-330010-037(MUP),

LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

Zoning:

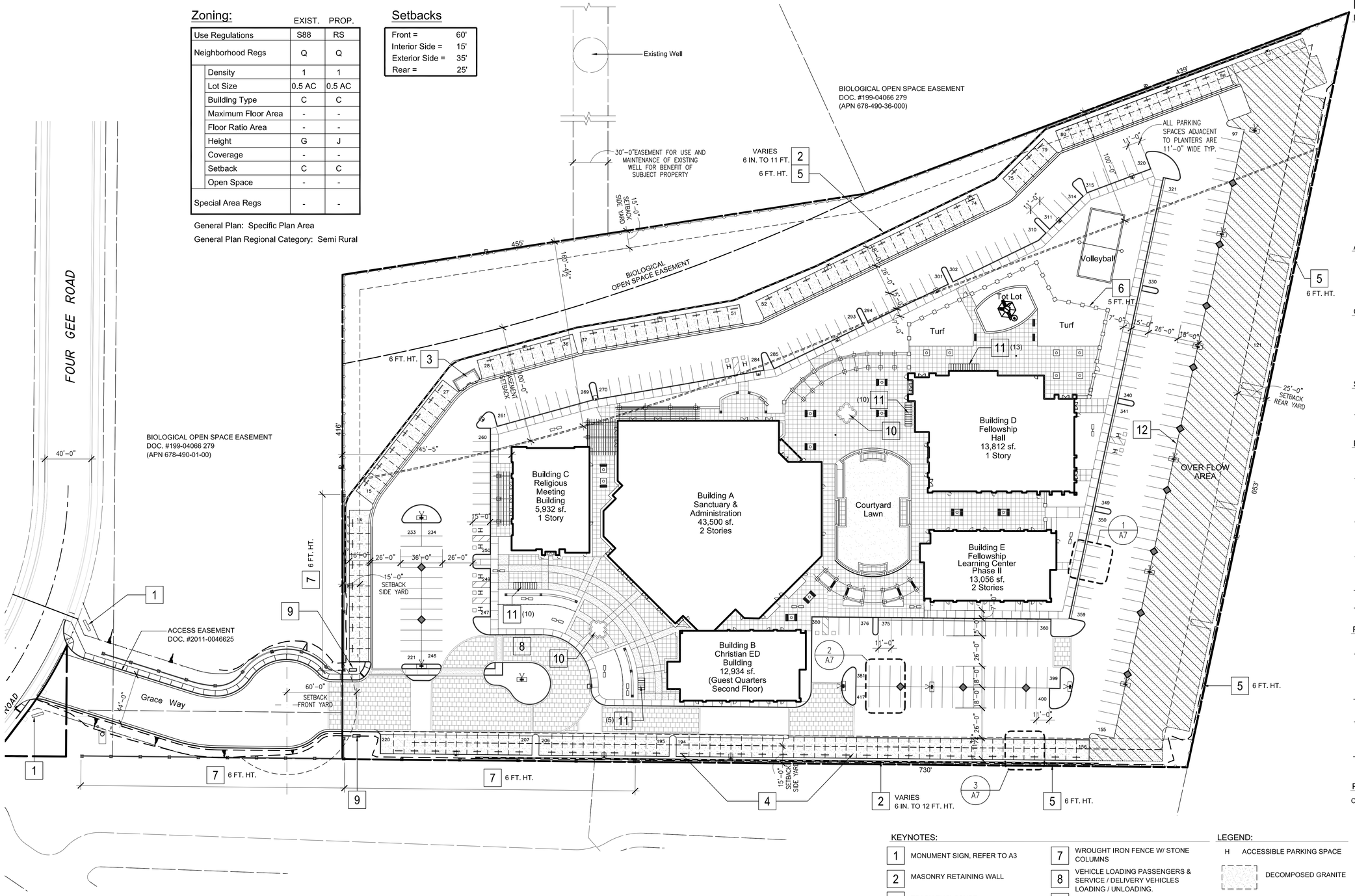
		EXIST.	PROP.
Use Regulations		S88	RS
Neighborhood Regs		Q	Q
	Density	1	1
	Lot Size	0.5 AC	0.5 AC
	Building Type	C	C
	Maximum Floor Area	-	-
	Floor Ratio Area	-	-
	Height	G	J
	Coverage	-	-
	Setback	C	C
	Open Space	-	-
Special Area Regs		-	-

General Plan: Specific Plan Area

General Plan Regional Category: Semi Rural

Setbacks

Front =	60'
Interior Side =	15'
Exterior Side =	35'
Rear =	25'



Phase II Site Plan

Scale: 1" = 40'-0"

0 40' 80' 120'

KEYNOTES:

1	MONUMENT SIGN, REFER TO A3
2	MASONRY RETAINING WALL
3	TRASH ENCLOSURE
4	CHURCH VEHICLE OFF HOUR AND OVERNIGHT PARKING, SCREENED WITH WALLS, FENCE AND LANDSCAPING.
5	VINYL COATED CHAIN LINK FENCE
6	WROUGHT IRON FENCE W/ STONE COLUMNS
7	WROUGHT IRON FENCE W/ STONE COLUMNS
8	VEHICLE LOADING PASSENGERS & SERVICE / DELIVERY VEHICLES LOADING / UNLOADING.
9	SMALL MONUMENT SIGN, REFER TO A3
10	FOUNTAIN
11	BICYCLE RACK
12	4" WIDE WHITE STRIPE AT FRONT OF PARKING STALLS THIS AISLE

LEGEND:

H ACCESSIBLE PARKING SPACE

DECOMPOSED GRANITE

DECOMPOSED GRANITE OVER FLOW AREA

RESUME:

LEGAL DESCRIPTION:

REMAINDER PARCEL OF PARCEL MAP 18105, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THEREOF FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, SEPTEMBER 4, 1998.

TENTATIVE PARCEL MAP NO.:	TENTATIVE MAP 5123RPL
ASSESSOR'S PARCEL NO.:	678-060-2700 & 678-422-03-00)
GENERAL PLAN REGIONAL CATEGORY:	SEMI RURAL
COMMUNITY/ SUBREGIONAL PLAN AREA:	SAN DIEGUITO
LAND USE DESIGNATION:	SPA SANTA FE VALLEY SPECIFIC PLAN)
ASSOCIATED PERMITS:	REZONE AND MAJOR USE PERMIT & OPEN SPACE EASEMENT VACATION
WATER SOURCE/WATER DIST.:	OLIVENHAIN MUNICIPAL WATER DISTRICT
SEWER DISTRICT:	RANCHO SANTA FE COMMUNITY SERVICE DISTRICT
FIRE DISTRICT:	RANCHO SANTA FE FIRE PROTECTION DISTRICT
SCHOOL DISTRICT:	POWAY UNIFIED SCHOOL DISTRICT -
EXISTING ZONING:	PARCEL 1: S-88

APPLICANT:

CHINESE BIBLE CHURCH OF SAN DIEGO
12335 World Trade Dr #2
San Diego, CA 92128-3783
TEL.: (858) 675-8777
FAX: (858) 675-8778
CONTACT: Gloria Lee
gloria.office@cbcsd.com

OWNER:

CHINESE BIBLE CHURCH OF SAN DIEGO
12335 World Trade Dr #2
San Diego, CA 92128-3783
TEL.: (858) 675-8777
FAX: (858) 675-8778
CONTACT: Gloria Lee
gloria.office@cbcsd.com

SITE AREA:

GROSS AREA:	393,403 SF	(9.03 AC)
PRIVATE ROAD EASEMENT:	30,900 SF	(0.71 AC)
NET AREA (EXCLUSIVE OF ROAD EASEMENT):	362,413 SF	(8.32 AC)

PHASE I BUILDING AREA:

BUILDING A: SANCTUARY & ADMINISTRATION	
SECOND FLOOR:	5,866 SF
FIRST FLOOR:	26,866 SF
TOTAL:	32,732 SF
BUILDING B: CHRISTIAN ED BUILDING	
SECOND FLOOR:	6,633 SF
FIRST FLOOR:	6,301 SF
TOTAL:	12,934 SF
BUILDING C: RELIGIOUS MEETING BUILDING	
FIRST FLOOR:	5,932 SF
TOTAL:	5,932 SF
BUILDING D: FELLOWSHIP HALL	
FIRST FLOOR:	13,812 SF
TOTAL:	13,812 SF
TOTAL PHASE I BUILDING AREA:	65,410 SF

PHASE II BUILDING AREA:

BUILDING A: SANCTUARY & ADMINISTRATION	
SECOND FLOOR:	10,768 SF
TOTAL:	10,768 SF
BUILDING E: FELLOWSHIP LEARNING CENTER	
SECOND FLOOR:	6,386 SF
FIRST FLOOR:	6,670 SF
TOTAL:	13,056 SF
TOTAL BUILDING AREA:	23,824 SF
PHASE I	65,410 SF
PHASE II	23,824 SF
TOTAL PHASE II BUILDING AREA: (BASEMENT AREA MAY BE ADDED IN THE FUTURE)	89,234 SF

PARKING:

CHURCH PARKING REQUIRED:

CHURCH SEATING CAPACITY:	1,500 SEATS
PARKING RATIO:	4:1
PARKING REQUIRED:	
STANDARD:	364 SPACES
ACCESSIBLE:	11 SPACES
TOTAL PARKING REQUIRED:	375 SPACES
PARKING PROVIDED:	
STANDARD:	406 SPACES
ACCESSIBLE:	11 SPACES
TOTAL PARKING PROVIDED:	417 SPACES
OVER FLOW AREA (DECOMPOSED GRANITE):	
TOTAL S.F. AREA:	38,836 S.F.

SILLMAN WRIGHT ARCHITECTS

CHINESE BIBLE CHURCH OF SAN DIEGO

HARPER COMMUNITIES INC.

Date	Description
01/16/2012	County Resubmit
08/23/2012	County Resubmit
02/19/2013	County Resubmit
06/03/2013	County Resubmit

Project Number:
3600 10-004 (REZ) 3300 10-037 (MUP)

Sheet Titles: Phase II Over-all Site Plan

Sheet No.: A2

Attachment B

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

LIGHTING SCHEDULE:

Site Lighting Schedule and Specifications

Plan Item	Description	Maker	Fixture Model	Fixture Photo	Notes	bulb type	lumens	wattage rating	Mounting Height	Alternate Fixture Model	Alternate Fixture Photo
"A"	Dual Parking Lot Lighting Full Cutoff Fixture	Allscape	AL-09-B/1-180LPS-T21-120-SXIII-BZ-PCC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	Low Pressure Sodium T21	22,500	180	22' 6"	Cree ARE-EDG 4M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"B"	Single Parking Lot Lighting Full Cutoff Fixture	Allscape	AL-09-B/2-180LPS-T21-120-SXIII-BZ-PCC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	Low Pressure Sodium T17	22,500	180	22' 6"	Cree ARE-EDG 3M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"C"	Wall Mounted Full Cutoff Fixture	Selux Corp.	BPC L R2 WH150 BZ 347 PC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	High Pressure Sodium	4,000	50	12'	Cree ARE-EDG 3M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"D"	Double Pole Mounted Full Cutoff Fixture	Selux Corp.	BPC L R2 2C H150 BZ 347 PC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	High Pressure Sodium	4,000	50	12'	Cree ARE-EDG 4M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"E"	RAB Full Cutoff Flood Light	RAB Lighting	FF50/PCS		Attached to parking lot light pole. Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	High Pressure Sodium	4,000	50	22'	Alternate at playground areas: SILL CityliterTM 150 Halogen Wide Beam by Selux with Q3000E lamp 300W	

utdoor lighting shall conform to Title 24: CA Energy code. Outdoor lighting shall be automatically controlled so that it is turned off during daytime hours and during other times when it is not needed. Luminaires with lamps larger han 175 W must be classified as cut-off so that the majority of the light is directed toward the ground. Luminaires with lamps larger than 60 W must also be high efficacy or controlled by a motion sensor. The mandatory measures equire that lighting systems have controls for efficient operation, that luminaires rated 100 W or greater be high efficacy or be controlled by a motion sensor and that luminaires using lamps rated greater than 175 W direct the ajority of light toward the ground (cut-off type). All permanently installed outdoor luminaires employing lamps rated over 100 watts shall either: have a lamp efficacy of at least 60 lumens per watt; or be controlled by a motion ensor unless exempted from the 8 possible exceptions.

ll outdoor luminaires that use lamps rated greater than 175 watts in hardscape areas including parking lots, building entrances, sales and non-sales canopies, and all outdoor sales areas shall be designated Cutoff for light istribution. To comply with this requirement, the luminaire shall be rated Cutoff in a photometric test report that includes any tilt or other non-level mounting condition of the installed luminaire. Cutoff is a luminaire light istribution classification where the candela per 1000 lamp lumens does not numerically exceed 25 at or above a vertical angle of 90 degrees above nadir, and 100 at or above a vertical angle of 80 degrees above nadir. Nadir is in he direction of straight down, as would be indicated by a plumb line. 90 degrees above nadir is horizontal. 80 degrees above nadir is 10 degrees below horizontal unless exempted from the 6 possible exceptions.

ll permanently installed outdoor lighting shall be controlled by a photocontrol or astronomical time switch that automatically turns off the outdoor lighting when daylight is available unless exempted from the exception. For ghting of building facades, parking lots, sales and non-sales canopies, all outdoor sales areas, and student pick-up/drop-off zones where two or more luminaires are used, an automatic time switch shall be installed that is capable f (1) turning off the lighting when not needed and (2) reducing the lighting power (in watts) by at least 50 percent but not exceeding 80 percent or providing continuous dimming through a range that includes 50 percent through 80 ercent reduction unless exempted from the 6 possible exceptions.

utdoor Lighting Applications Not Regulated. When a luminaire is installed only to illuminate one or more of the following applications, the lighting power for that luminaire shall be exempt from §147(b). The Standards clarify that t least 50 percent of the light from the luminaire must fall on an application to qualify as being installed for that application. Exemptions include: temporary; sports and athletic fields, and children's playground; public onuments; signs; water features (subject to Article 680 of the California Electrical Code); ramps; landscape lighting; themes and special effects; theatrical and other outdoor live performances.

NOTES:

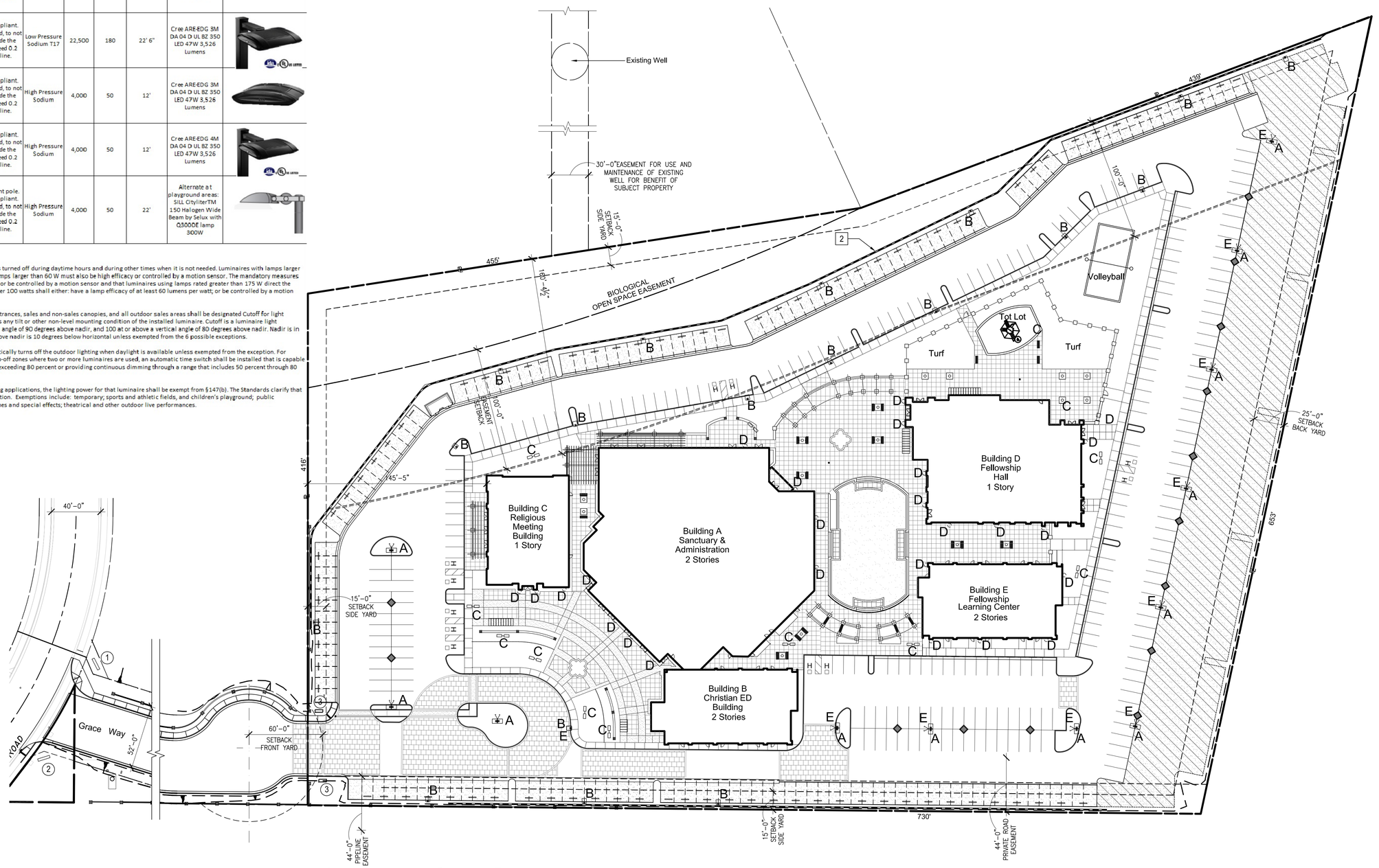
1. THESE PLANS WILL CONFORM TO SECTION 59.101 ET.SEQ. OF THE SAN DIEGO COUNTY CODE AND SECTION 6322 ET.SEQ. OF THE COUNTY ZONING ORDINANCE.

LIGHTING LEGEND:

- A & E: PARKING LOT LIGHTING (HIGH PRESSURE SODIUM): KIM LIGHTING 2B AR3 250HPS 240
- B: SINGLE PARKING LOT LIGHTING (HIGH PRESSURE SODIUM): KIM LIGHTING 2B AR3 250HPS 240
- C POLE SITE LIGHTING: DESIGNER'S FOUNTAIN 31331-BZ 100 W
- D WALL LIGHT: DESIGNER'S FOUNTAIN 31336-BZ

SIGNAGE LEGEND (SEE SHEET # A12 FOR SIGNAGE DETAILS)

1. MAIN SIGN PER ITEM A, SHEET A12
2. ENTRY MONUMENT SIGN PER ITEM B, SHEET A12
3. SMALL MONUMENT / SECONDARY SITE SIGNS PER ITEM C SHEET A12



Lighting Site Plan

Scale: 1" = 40'-0"

0 40' 80' 120'

SILLMAN WRIGHT ARCHITECTS

CHINESE BIBLE CHURCH OF SAN DIEGO

HARPER COMMUNITIES INC.

Date	Description
01/16/2012	County Resubmit
08/23/2012	County Resubmit
02/19/2013	County Resubmit
06/03/2013	County Resubmit

Project Number:
3600 10-004 (REZ) 3300 10-037 (MUP)

Sheet Titles: Lighting & Signage Site Plan

Sheet No.: A3

Attachment C

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lumens	LLF	Description
→	7	CR1-S25-H3	SINGLE	27000	0.900	CR1-S25-H3
→	14	CR1-S25-H4	SINGLE	27000	0.900	CR1-S25-H4
←→	13	CR1-S25-H4-TWIN	BACK-BACK	27000	0.900	CR1-S25-H4

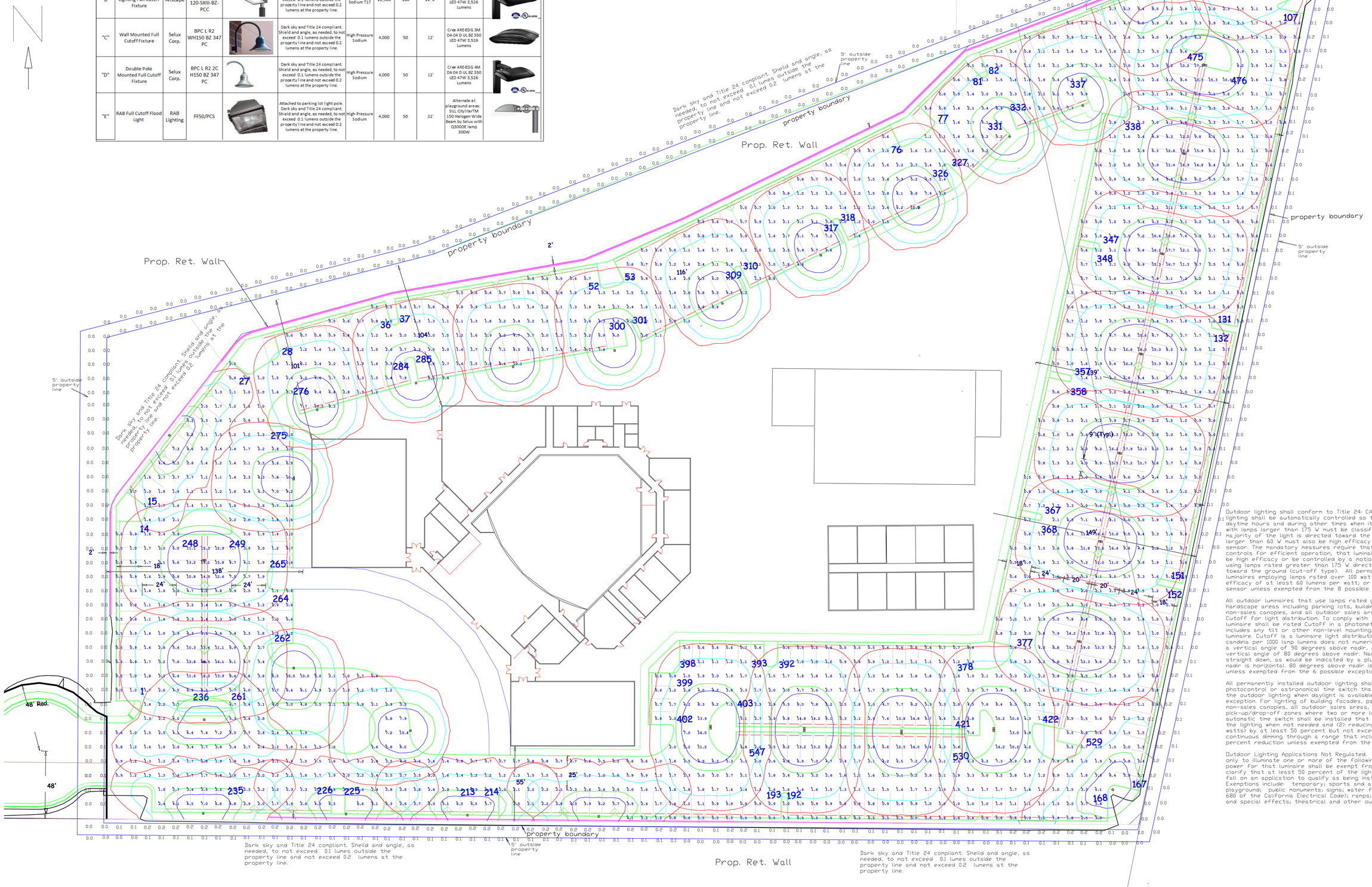
Site Lighting Schedule and Specifications

Plan Item	Description	Maker	Fixture Model	Fixture Photo	Notes	bulb type	lumens	wattage rating	Mounting Height	Alternate Fixture Model	Alternate Fixture Photo
"A"	Dual Parking Lot Lighting Full Cutoff Fixture	Allscape	AL-09-B/1-180LPS-T21-120-SXIII-BZ-PCC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	Low Pressure Sodium T21	22,500	180	22' 6"	Cree ARE-EDG 4M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"B"	Single Parking Lot Lighting Full Cutoff Fixture	Allscape	AL-09-B/2-180LPS-T21-120-SXIII-BZ-PCC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	Low Pressure Sodium T17	22,500	180	22' 6"	Cree ARE-EDG 3M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"C"	Wall Mounted Full Cutoff Fixture	Selux Corp.	BPC L R2 WH150 BZ 347 PC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	High Pressure Sodium	4,000	50	12'	Cree ARE-EDG 3M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"D"	Double Pole Mounted Full Cutoff Fixture	Selux Corp.	BPC L R2 2C H150 BZ 347 PC		Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	High Pressure Sodium	4,000	50	12'	Cree ARE-EDG 4M DA 04 D UL BZ 350 LED 47W 3,526 Lumens	
"E"	RAB Full Cutoff Flood Light	RAB Lighting	FF50/PCS		Attached to parking lot light pole. Dark sky and Title 24 compliant. Shield and angle, as needed, to not exceed 0.1 lumens outside the property line and not exceed 0.2 lumens at the property line.	High Pressure Sodium	4,000	50	22'	Alternate at playground areas: SiLL CityInterTM 150 Halogen Wide Beam by Selux with CJ3000E lamp 300W	

LOT 36
MAP 13985

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Object_Planar	Illuminance	Fc	3.12	19.5	0.5	6.24	39.00

NOTES:- MOUNTING HEIGHT: 22'-6" A.F.F.



Outdoor lighting shall conform to Title 24: CA Energy code. Outdoor lighting shall be automatically controlled so that it is turned off during daytime hours and during other times when it is not needed. Luminaires with lamps larger than 60 W must also be high efficacy or controlled by a motion sensor. The mandatory measures require that lighting systems have controls for efficient operation, that luminaires rated 100 W or greater be high efficacy or be controlled by a motion sensor and that luminaires using lamps rated greater than 175 W direct the majority of light toward the ground (cut-off type). All permanently installed outdoor luminaires employing lamps rated over 100 watts shall either have a lamp efficacy of at least 60 lumens per watt; or be controlled by a motion sensor unless exempted from the 8 possible exceptions.

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Attachment D

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

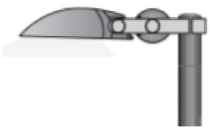
San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

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Attachment E

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

Attachment E

Chinese Bible Church of San Diego 16919 Four Gee Rd, San Diego, CA 92127



Attachment F

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132



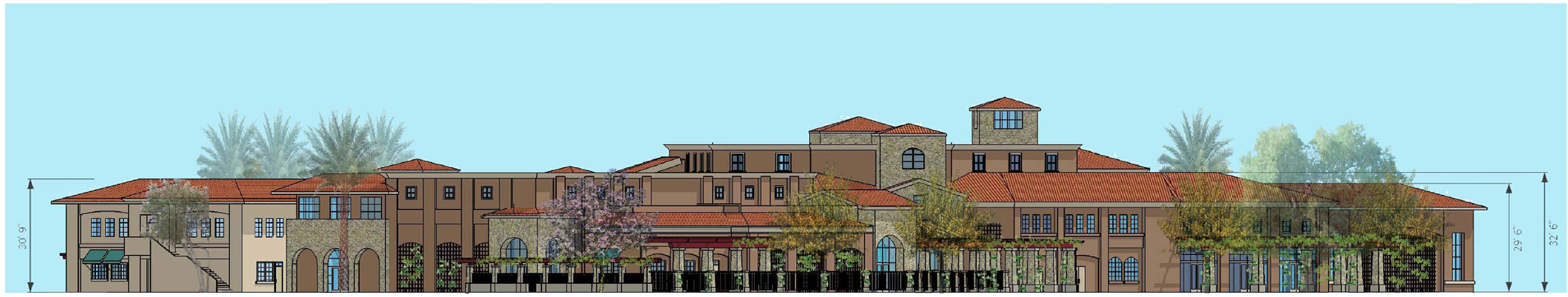
3 West Elevation

KEYNOTES:

1	BARREL TILE ROOF	8	ALUMINUM FRAMED WINDOWS
2	PLASTER CORNICE	9	FABRIC AWNINGS
3	PLASTER TRIM	10	CULTURED STONE COLUMNS
4	PLASTER	11	WROUGHT IRON FENCE
5	LOW-E GLASS		
6	METAL TRELLIS		
7	CULTURED STONE		



2 North Elevation

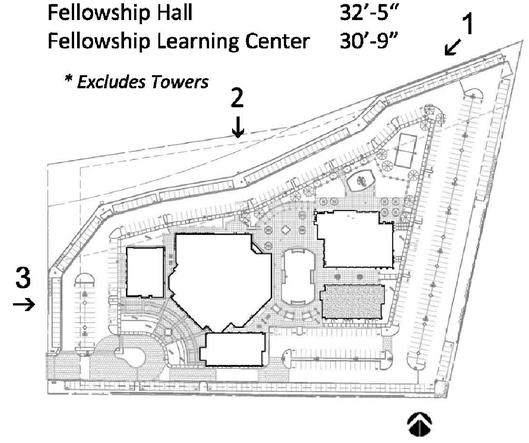


1 Northeast Elevation

Average Building Heights

Sanctuary & Admin	40'-0"
Religious Mtg Bldg	29'-6"
Christian Ed Bldg	29'-6"
Fellowship Hall	32'-5"
Fellowship Learning Center	30'-9"

** Excludes Towers*



SILLMAN WRIGHT ARCHITECTS

CHINESE BIBLE CHURCH OF SAN DIEGO

HARPER COMMUNITIES INC.

Date	Description
01/16/2012	County Resubmit
08/23/2012	County Resubmit
02/19/2013	County Resubmit
06/03/2013	County Resubmit

Project Number:
3600 10-004 (REZ) 3300 10-037 (MUP)

Sheet Titles:
Phase II Elevations

Sheet No.:
A11

Attachment G

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

APN 678-060-27-00, KIVA Project: 09-0117132

ALLSCAPE®
2930 South Fairview Street
Santa Ana, CA 92704
Phone: 714 668 3660
Fax: 714 668 1107
sales@allscape.net
http://www.alllighting.com

AL-09

Low Pressure Sodium

Parking Areas

Roadway

Large Areas



Specifications

Certifications The fixture shall be ETL and CETL listed for wet location.

Light Distribution The luminaire shall meet the specified light distribution and footcandle levels with an internal optical system and horizontal lamping.

Assembly Field installation to bracket or pole shall be accomplished without having to remove or disassemble any fixture component. Fixture shall be ETL listed "suitable for wet locations."

Housing The fixture housing shall be constructed from heavy gauge aluminum sheet, internally welded and silicone sealed.

Door Frame Assembly Extruded clear anodized aluminum door frame shall be furnished with fully tempered, thermal and shock resistant clear glass. White dacron open cell gasket prevents entry of moisture, dust, and insects. All external hardware to be stainless steel.

Ballast Ballast shall be tray mounted and readily accessible, removable and insulated. The fixture is to be factory pre-wired, completely assembled and electronically tested prior to shipment. Quick disconnects are standard.

Optical Assembly The optical assembly shall be of highly specular aluminum.

Finish BK-BZ-WH-GR-GY-NA baked enamel standard, other colors available. Duranodic® anodized finishes shall be applied over brushed aluminum surfaces of a uniform fine grain. (Specify baked enamel or anodized finish color.)

Mounting Details AL-09-B Bracket externally slip fits 2 3/8" O.D. tenons, and the AL-09-R Bracket externally slip fits 2 3/8" to 4" diameter tenons if required. Specify exact tenon dimension, and dimensions of top of round or square poles to ensure compatibility. AL-09-BC denotes aluminum arm finished with hardware for direct mounting to side of pole. Luminaire shall be pre-wired with high temperature wire, making disassembly for installation unnecessary.

PROJECT
FIXTURE TYPE
CATALOG#

Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled "Contains Mercury" and/or with the symbol "Hg." Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org

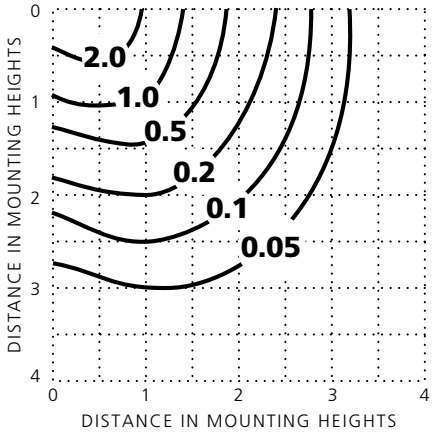
Product Order Guide

Series	Mounting Type	Number of Fixtures	Max Watts	Lamp Type	Voltage[1]	Reflector Type	Finish[1]		Options	
AL-09	BC/	1	35/55 LPS	T17	120	SXIII	BZ	Bronze	F	Fusing
	B/	2	180 LPS	T21	208	SXII[2]	BK	Black	FF	Double Fusing
	R/		(2) 35/55	T17	240		GR	Green	PCC	Photo Control W/Receptacle
	K/		Twin Lamp		277		WH	White	HSS	House Side Shield (Internal)
	CM/		(2) 90	T21	480		GY	Gray	CP	Clear Polycarbonate Lens
			Twin Lamp				CC	Custom Color	PSV	Pole Side Visor (External)
							BAA	Clear Anodized	FF480V	Double Fusing 480V
							BZA	Bronze Anodized		
							BKA	Black Anodized		
							NA	Natural Aluminum		

1 Consult factory for other colors and voltages

Example: AL-09-B/1-180LPS-T21-120-SXIII-BZ-PCC

Photometric Data



Conversion Factor

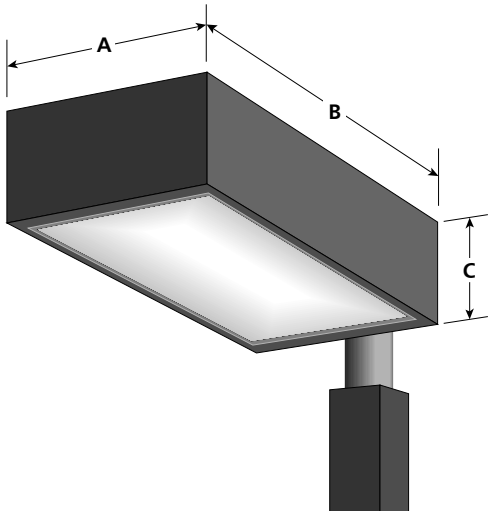
Mounting Height	20'	25'	30'	35'	40'
Footcandle Multiplier	2.2	1.4	1.0	1.73	.56

AL-09-135LPS-SXIV
Clear Lamp
22,500 Lumens
30' Mounting Height
ISOLUX Curves—value in initial footcandles

AL

Luminaire Dimensions

Luminaire	A	B	C	Weight	EPA
AL-09-35/55	14-5/16"	20-3/4"	7-1/4"	42#	1.40
AL-09-90	14-5/16"	24-5/8"	7-1/4"	48#	1.52
AL-09-135	14-5/16"	34-3/8"	7-1/4"	55#	1.95
AL-09-180	14-5/16"	48"	7-1/4"	62#	2.65



Mounting Type

Mounting Type

BC/ Concealed Hardware Mounting Arm
B/ Square Hub Mounting for 2-3/8" Tenon
R/ Round Hub Mounting for 2-3/8" - 4" Tenon
K/ Adjustable Knuckle for 2-3/8" Tenon
CM/ Ceiling Mount

For other mounting types see bracket section

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ALLSCAPE®
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Santa Ana, CA 92704
Phone: 714 668 3660
Fax: 714 668 1107
sales@allscape.net
http://www.alllighting.com

AL-09

Low Pressure Sodium

Parking Areas

Roadway

Large Areas



Specifications

Certifications The fixture shall be ETL and CETL listed for wet location.

Light Distribution The luminaire shall meet the specified light distribution and footcandle levels with an internal optical system and horizontal lamping.

Assembly Field installation to bracket or pole shall be accomplished without having to remove or disassemble any fixture component. Fixture shall be ETL listed "suitable for wet locations."

Housing The fixture housing shall be constructed from heavy gauge aluminum sheet, internally welded and silicone sealed.

Door Frame Assembly Extruded clear anodized aluminum door frame shall be furnished with fully tempered, thermal and shock resistant clear glass. White dacron open cell gasket prevents entry of moisture, dust, and insects. All external hardware to be stainless steel.

Ballast Ballast shall be tray mounted and readily accessible, removable and insulated. The fixture is to be factory pre-wired, completely assembled and electronically tested prior to shipment. Quick disconnects are standard.

Optical Assembly The optical assembly shall be of highly specular aluminum.

Finish BK-BZ-WH-GR-GY-NA baked enamel standard, other colors available. Duranodic® anodized finishes shall be applied over brushed aluminum surfaces of a uniform fine grain. (Specify baked enamel or anodized finish color.)

Mounting Details AL-09-B Bracket externally slip fits 2 3/8" O.D. tenons, and the AL-09-R Bracket externally slip fits 2 3/8" to 4" diameter tenons if required. Specify exact tenon dimension, and dimensions of top of round or square poles to ensure compatibility. AL-09-BC denotes aluminum arm finished with hardware for direct mounting to side of pole. Luminaire shall be pre-wired with high temperature wire, making disassembly for installation unnecessary.

PROJECT
FIXTURE TYPE
CATALOG#

Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled "Contains Mercury" and/or with the symbol "Hg." Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org

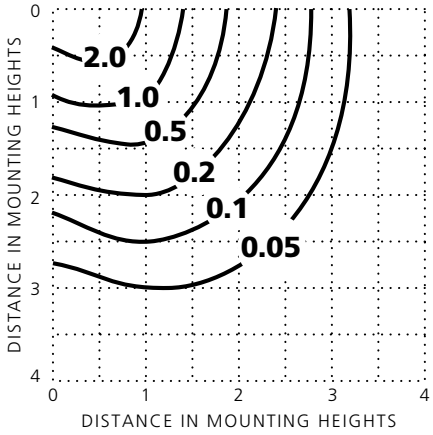
Product Order Guide

Series	Mounting Type	Number of Fixtures	Max Watts	Lamp Type	Voltage[1]	Reflector Type	Finish[1]		Options	
AL-09	BC/	1	35/55 LPS	T17	120	SXIII	BZ	Bronze	F	Fusing
	B/	2	180 LPS	T21	208	SXII[2]	BK	Black	FF	Double Fusing
	R/		(2) 35/55	T17	240		GR	Green	PCC	Photo Control W/Receptacle
	K/		Twin Lamp		277		WH	White	HSS	House Side Shield (Internal)
	CM/		(2) 90	T21	480		GY	Gray	CP	Clear Polycarbonate Lens
			Twin Lamp				CC	Custom Color	PSV	Pole Side Visor (External)
							BAA	Clear Anodized	FF480V	Double Fusing 480V
							BZA	Bronze Anodized		
							BKA	Black Anodized		
							NA	Natural Aluminum		

1 Consult factory for other colors and voltages

Example: AL-09-B/1-180LPS-T21-120-SXIII-BZ-PCC

Photometric Data



Conversion Factor

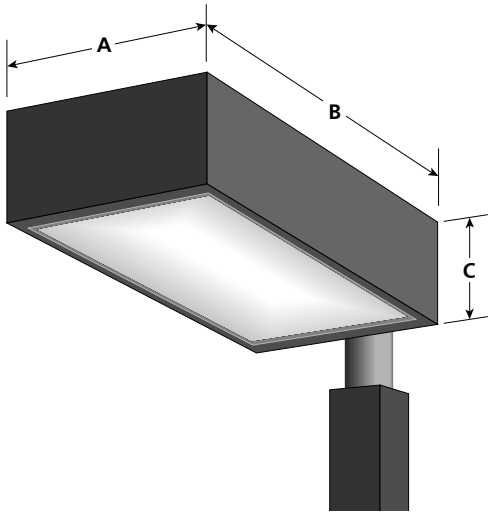
Mounting Height	20'	25'	30'	35'	40'
Footcandle Multiplier	2.2	1.4	1.0	1.73	.56

AL-09-135LPS-SXIV
Clear Lamp
22,500 Lumens
30' Mounting Height
ISOLUX Curves—value in initial footcandles

AL

Luminaire Dimensions

Luminaire	A	B	C	Weight	EPA
AL-09-35/55	14-5/16"	20-3/4"	7-1/4"	42#	1.40
AL-09-90	14-5/16"	24-5/8"	7-1/4"	48#	1.52
AL-09-135	14-5/16"	34-3/8"	7-1/4"	55#	1.95
AL-09-180	14-5/16"	48"	7-1/4"	62#	2.65



Mounting Type

Mounting Type

BC/ Concealed Hardware Mounting Arm
B/ Square Hub Mounting for 2-3/8" Tenon
R/ Round Hub Mounting for 2-3/8" - 4" Tenon
K/ Adjustable Knuckle for 2-3/8" Tenon
CM/ Ceiling Mount

For other mounting types see bracket section

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Beta Pendant

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Project: Chinese Bible Church of San Diego

Type: Wall Mounted Cut Off Fixture **Qty:**

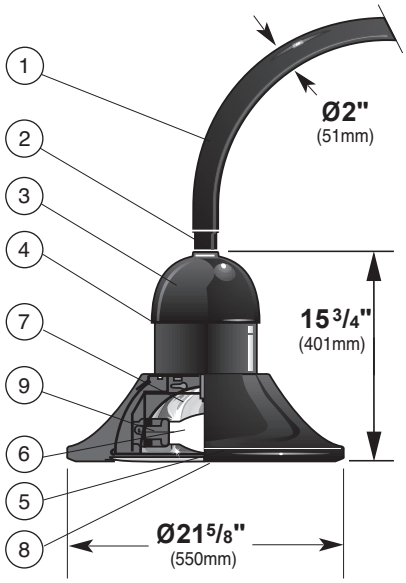
BPC	L	R2	W	H150	BZ	347	PC
Series	Optics	Reflector	Mounting	Lamping	Finish	Voltage	Options

none	n/a	n/a	none
Pole Series	Height	Finish	Pole Options

Series	Optics	Reflector	Mounting	Lamping				Finish	Voltage	Options
				Metal Halide		HPS				
BPC Beta Pendant	**L** Tempered Glass Lens	**R2** Type II Aluminum Reflector	**1** Single	**H050**[1]	50w	**S050**[1]	50w	**WH** White	**120**	**HS** House Side Shield
	S Sagged Glass Lens	**R3** Type III Aluminum Reflector	**2C** Double Cluster	**H070**	70w	**S070**	70w	**BK** Black	**208**	**QR** Quartz Restrike (40w Max)
		R5 Type V Aluminum Reflector	**3C** Triple Cluster	**H100**	100w	**S100**	100w	**BZ** Bronze	**240**	**FS**[1] Single Fusing
			4C Quadruple Cluster	**H150**	150w	**S150**[2]	150w	**SV** Silver	**277**	**PC** Photocell
			W Wall Mount					**SP** Specify Premium Color	**347**	**PCT** Photocell Tenon
			P Pendant							

[1] Not available for 347v [2] Only for 55v lamp

BPC-L-R2



BPC-S-R2



1. Mounting Arm - Ø2" (51mm) curved arm attaches to pole by means of a transition fitter supplied with fixture.

2. Fixture Connection - The fixture cap is securely fastened to curved arm using a steel connector.

3. Fixture Cap - Decorative fixture cap; removable to provide easy access to ballast.

4. Gasketing - Continuous molded gaskets provide weather-proofing, dust, and insect control.

5. Fixture Hood - Decorative aluminum shade.

6. Lamp - One clear, ED17 metal halide or high pressure sodium up to 150w. Horizontal lamp for R2 and R3 reflectors; base-up vertical lamp for R5 reflector. Lamp provided by others.

7. Reflector - Precision formed aluminum reflector available with a Type II, III, or V distribution.

8. Shielding - Specify tempered flat glass lens (L), or tempered sagged glass lens (S). Both lenses are secured using a captive ring and are easily removable for access to lamp (no special tools required). Version with tempered Glass Lens (BPC-L) is IDA-Approved™ dark sky friendly.

9. Socket - 4KV Pulse rated porcelain medium base socket pre-wired to ballast at factory.

10. Ballast - (Not shown) A high efficiency, pulse start, core and coil ballast regulates voltage for H.I.D. lamp. Consult factory for detailed ballast information.

Exterior Luminaire Finish - Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultra violet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide. Hot Dip Galvanized finish (GV) on all steel parts also available.

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TEL (845) 691-7723
FAX (845) 691-6749
www.selux.us
BP-0712-01 (ss-V6.2)

NRTL Listed (i.e. UL, CSA)

Union Made Affiliated with **IBEW** *Local 363*

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Beta Pendant

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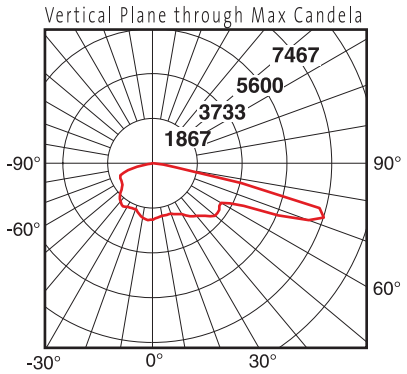
Photometry

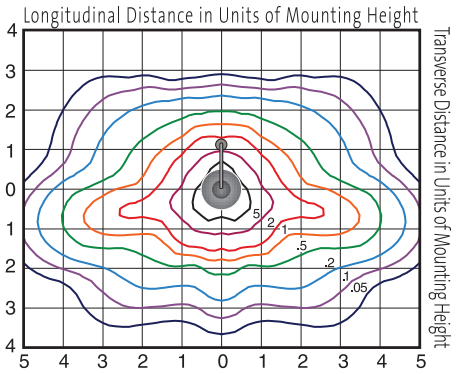
Closed Version / Tempered Flat Glass Lens / R2 Reflector / 150w MH

Catalog # BPC-L-R2-1-H150
Report # 2410 / SX-870AN3

- Precision formed aluminum reflector with specular "kick"reflectors to precisely control distribution.
- Ideal for applications demanding max. spacing.
- Maximum candela of 7467 at 72.5° from vertical.
- IES classification - Type II Full Cutoff.
- IDA-Approved™ dark sky friendly.

DOWNLOAD IES FILE:
http://www.selux.com/cms/products/exterior/ies/beta_pendant/BPC-L-R2-1-H150.zip



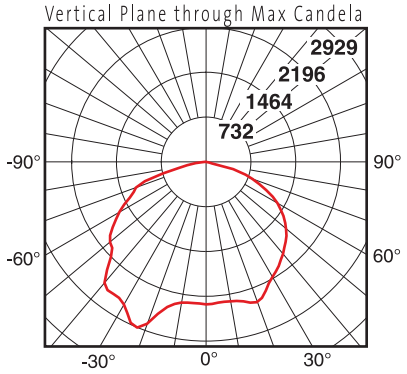


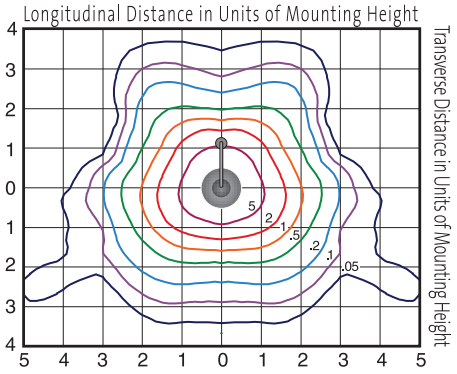
Closed Version / Tempered Flat Glass Lens / R3 Reflector /150w MH

Catalog # BPC-L-R3-1-H150
Report # LSI-13535

- Precision formed aluminum reflector with specular "kick"reflectors to precisely control distribution.
- Ideal for applications demanding max. spacing.
- Maximum candela of 2929 at -22.5° from vertical.
- IES classification - Type II Full Cutoff.
- IDA-Approved™ dark sky friendly.

DOWNLOAD IES FILE:
http://www.selux.com/cms/products/exterior/ies/beta_pendant/BPC-L-R3-1-H150.zip



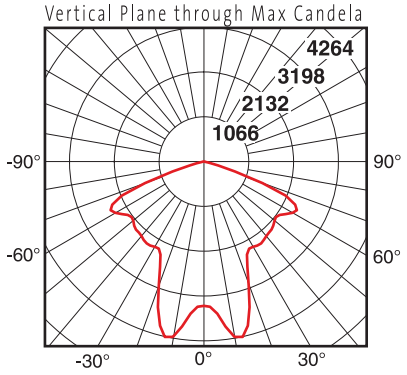


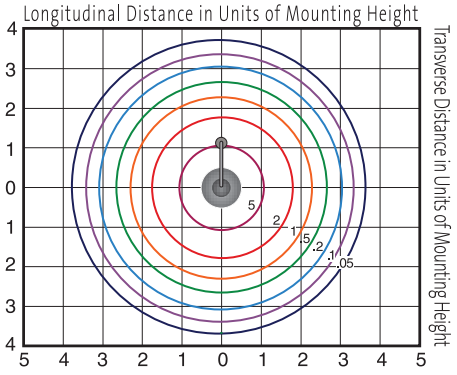
Closed Version / Tempered Flat Glass Lens / R5 Reflector / 150w MH

Catalog # BPC-L-R5-1-H150
Report # LSI-13593

- Precision formed aluminum reflector with vertical, base-up lamp.
- Ideal for applications demanding a uniform symmetric light distribution.
- Maximum candela of 4264 at 12.5° and -12.5° from vertical.
- IES classification - Type V Full Cutoff.
- IDA-Approved™ dark sky friendly.

DOWNLOAD IES FILE:
http://www.selux.com/cms/products/exterior/ies/beta_pendant/BPC-L-R5-1-H150.zip





HID Lamp Prorate Table (ED-17 Clear, Medium-Base Lamp)

High Pressure Sodium			Metal Halide		
Wattage	Factor	Initial Lumens	Wattage	Factor	Initial Lumens
50	0.28	4000	50	0.24	3400
70	0.45	6400	70	0.39	5500
100	0.67	9500	100	0.64	9000
150	1.02	14400	150	1.00	14000

Conversion Chart
Values based on 12' mounting height.

Mounting Height	Multiply
8'	1.22
10'	1.10
12'	1.00
14'	0.93
16'	0.87

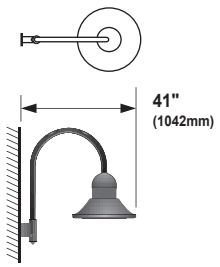
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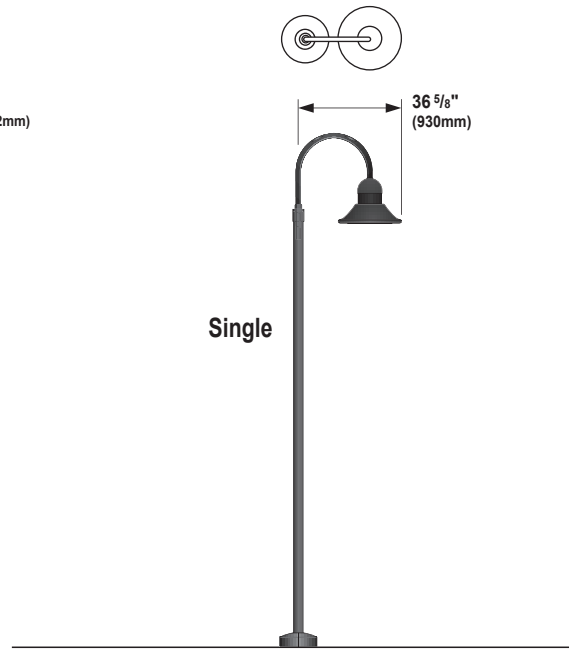
Beta Pendant

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Mounting



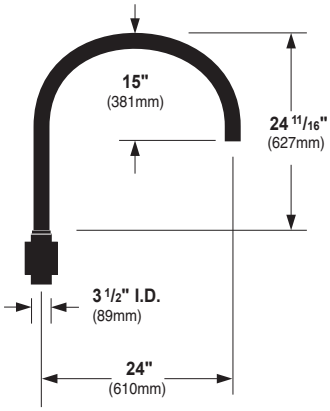
Wall Mount



Single

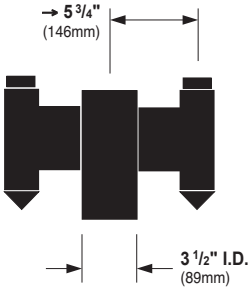
Arm

Curved steel tubing supplied with fixture head. Arm radius = 12" (305mm). Steel fitter slips over pole and is secured with (3) stainless steel screws.



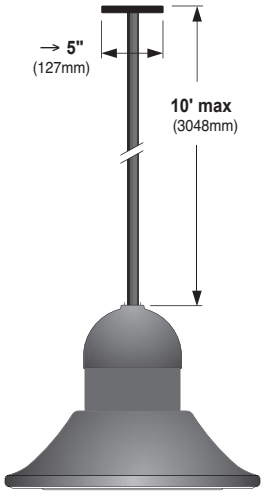
Multiple Pole Fitter

Fabricated steel fitter base and transition to pole. Secured to pole with (4) stainless steel Allen head set screws. Decorative caps at bottom of mounting arm locations are formed aluminum and drilled for water drainage.



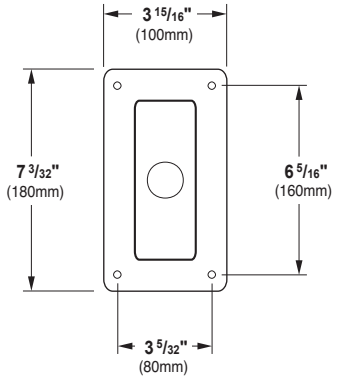
Stem for Pendant Mount

3/4" NPT steel threaded pipe. Specify stem length (10' max.) Formed steel canopy (→ 5.0" / 12.7mm) supplied with crossbar for junction box mounting. Junction box to be secured for load bearing requirements appropriate to local codes.



Wall Mount Back Plate

Fabricated steel mounting. Secured to wall with 5/16" (8mm) diameter fasteners (by others).



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Beta Pendant

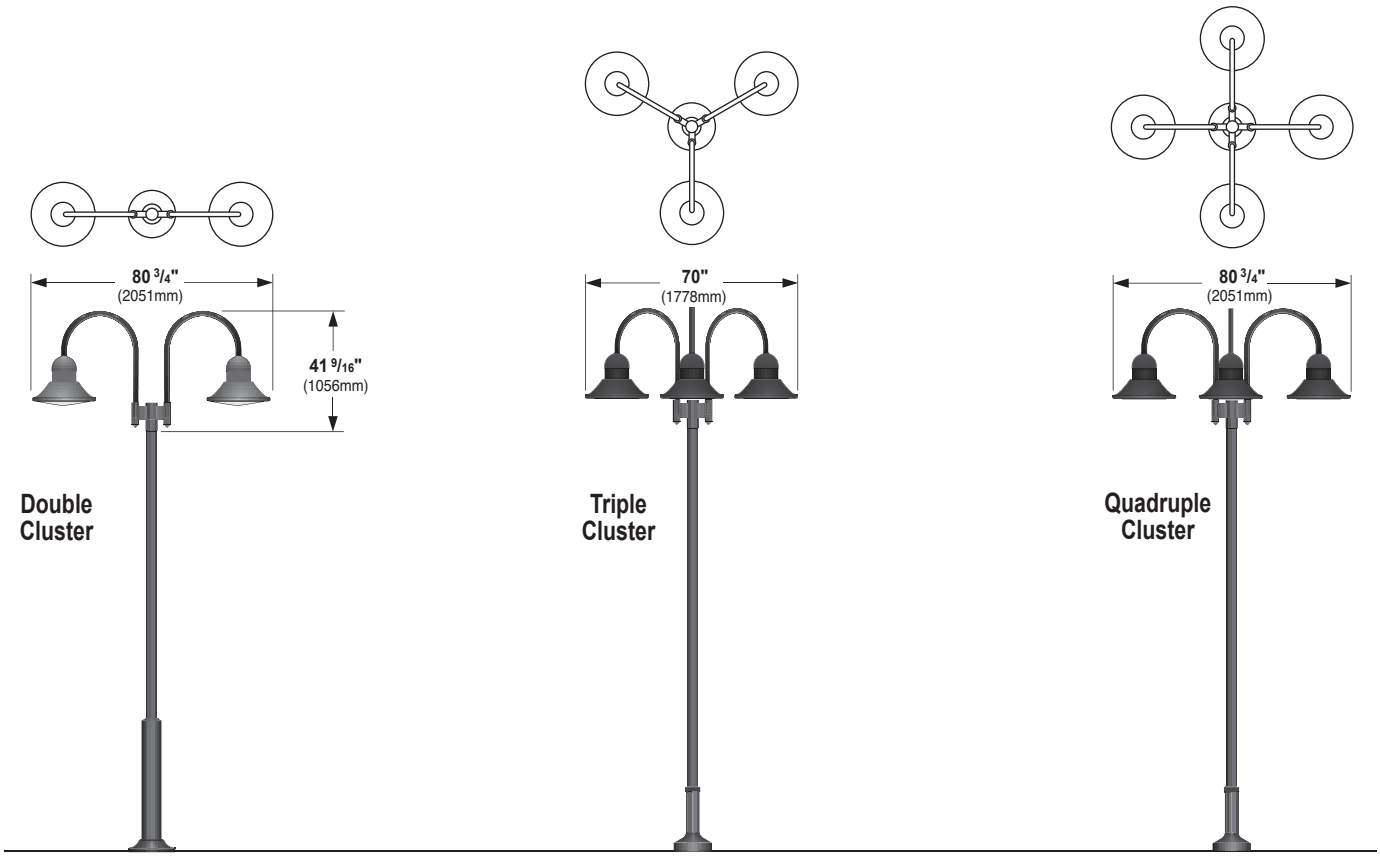
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Mounting

Double
Die-cast aluminum double round luminaire mounting arms secured to pole with four stainless steel, Allen head set screws. Outer slip fitter for 3 1/2" tenon.

Triple
Die-cast aluminum triple round luminaire mounting arms secured to pole with four stainless steel, Allen head set screws. Outer slip fitter for 3 1/2" tenon.

Quad
Die-cast aluminum quadruple round luminaire mounting arms secured to pole with four stainless steel, Allen head set screws. Outer slip fitter for 3 1/2" tenon.



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Beta Pendant

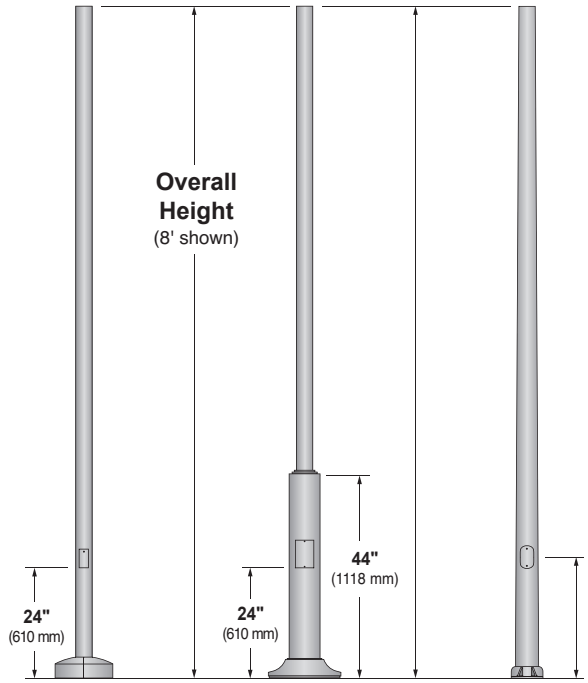
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Pole Information

Refer to A35, S635, or S35 Pole specification sheets for construction details, anchorage information and additional options.

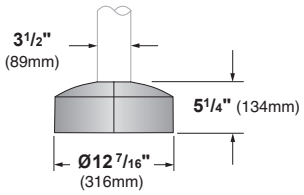
A35 & S35
Round Straight Aluminum & Round Straight Steel Poles

S635
Round Stepped Steel Pole

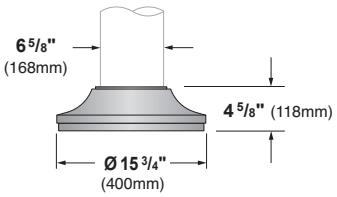


Shown with standard base covers.

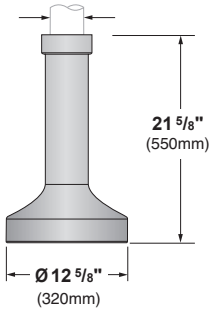
Straight Poles (A35 & S35)
BC5 Standard Base Cover
Two-piece cast aluminum



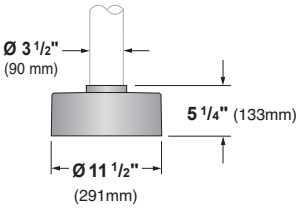
Stepped Steel Pole (S635)
BC6 Standard Base Cover
One-piece cast aluminum



BC1 Optional Base Cover
(A35 & S35) One-piece cast aluminum



BC4 Optional Base Cover
(A35 & S35) One-piece cast aluminum



Pole Series	Bolt Circle	EPA Information (ft^2) 70 mph	80 mph	90 mph	100 mph	110 mph	Height	Finish	Options
S635 3 1/2" Diameter Stepped Steel Pole	9"	57.6	44.3	34.6	27.5	22.8		**WH** White **BK** Black **BZ** Bronze **SV** Silver **SP** Specify Premium Color	**BC1** Decorative Cast Aluminum Base Cover (for A35 & S35 poles only) **BC4** One-piece Cast Aluminum Base Cover (for A35 & S35 poles only) **REC** GFCI Receptacle with weather-proof cover* **For Photocell option, see p.1** *** Weatherproof cover intended for portable tools or other portable equipment connected to the outlet only when attended. For other requirements please consult factory.**
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	16.1	12.2	9.4	7.3	5.9	**8** 8 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	14.8	11.3	8.6	6.7	5.4			
S635 3 1/2" Diameter Stepped Steel Pole	9"	45.6	35.0	27.3	21.6	17.8			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	12.4	9.3	7.1	5.4	4.3	**10** 10 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	11.4	8.6	6.5	4.9	3.9			
S635 3 1/2" Diameter Stepped Steel Pole	9"	37.6	28.7	22.3	17.5	14.4			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	9.9	7.3	5.4	4.0	3.1	**12** 12 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	9.1	6.7	4.9	3.6	2.8			
S635 3 1/2" Diameter Stepped Steel Pole	9"	31.7	24.2	18.6	14.6	11.9			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	8.0	5.8	4.2	3.0	2.2	**14** 14 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	7.3	5.3	3.8	2.7	1.9			
S635 3 1/2" Diameter Stepped Steel Pole	9"	21.7	15.8	12.3	9.6	7.6			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	4.9	3.2	2.2	1.4	0.8	**16** 16 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	4.4	2.8	1.9	1.2	0.6			

Other pole configurations available, consult factory. EPA Calculations allow for 1.3 Gust Factor

Effective Projected Area of Single Luminaire = 1.38 ft^2 (0.13m^2) / Weight of Luminaire = 27.5 lbs (12.5kg) (Includes Mounting Arm)
Effective Projected Area of Double Luminaire = 3.72 ft^2 (0.35m^2) / Weight of Double Luminaire (includes arms) = 81.0 lbs (36.7kg)

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Beta Pendant

selux



Project: Chinese Bible Church of San Diego

Type: Double Pole Mounted Cut Off Fixture **Qty:**

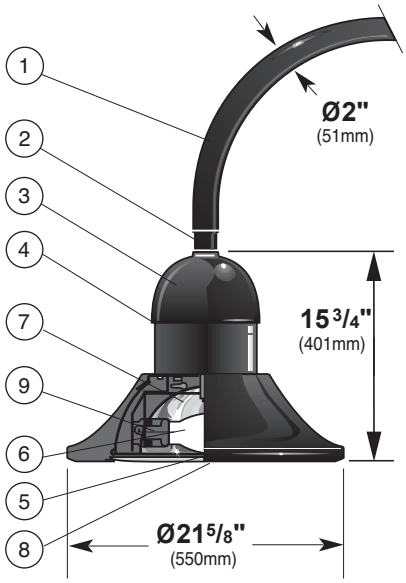
BPC	L	R2	2C	H150	BZ	347	PC
Series	Optics	Reflector	Mounting	Lamping	Finish	Voltage	Options

S635	12'	BZ	BC6
Pole Series	Height	Finish	Pole Options

Series	Optics	Reflector	Mounting	Lamping				Finish	Voltage	Options
				Metal Halide		HPS				
BPC Beta Pendant	**L** Tempered Glass Lens	**R2** Type II Aluminum Reflector	**1** Single	**H050**[1]	50w	**S050**[1]	50w	**WH** White	**120**	**HS** House Side Shield
	S Sagged Glass Lens	**R3** Type III Aluminum Reflector	**2C** Double Cluster	**H070**	70w	**S070**	70w	**BK** Black	**208**	**QR** Quartz Restrike (40w Max)
		R5 Type V Aluminum Reflector	**3C** Triple Cluster	**H100**	100w	**S100**	100w	**BZ** Bronze	**240**	**FS**[1] Single Fusing
			4C Quadruple Cluster	**H150**	150w	**S150**[2]	150w	**SV** Silver	**277**	**PC** Photocell
			W Wall Mount					**SP** Specify Premium Color	**347**	**PCT** Photocell Tenon
			P Pendant							

[1] Not available for 347v [2] Only for 55v lamp

BPC-L-R2



BPC-S-R2



1. Mounting Arm - Ø2" (51mm) curved arm attaches to pole by means of a transition fitter supplied with fixture.

2. Fixture Connection - The fixture cap is securely fastened to curved arm using a steel connector.

3. Fixture Cap - Decorative fixture cap; removable to provide easy access to ballast.

4. Gasketing - Continuous molded gaskets provide weather-proofing, dust, and insect control.

5. Fixture Hood - Decorative aluminum shade.

6. Lamp - One clear, ED17 metal halide or high pressure sodium up to 150w. Horizontal lamp for R2 and R3 reflectors; base-up vertical lamp for R5 reflector. Lamp provided by others.

7. Reflector - Precision formed aluminum reflector available with a Type II, III, or V distribution.

8. Shielding - Specify tempered flat glass lens (L), or tempered sagged glass lens (S). Both lenses are secured using a captive ring and are easily removable for access to lamp (no special tools required). Version with tempered Glass Lens (BPC-L) is IDA-Approved™ dark sky friendly.

9. Socket - 4KV Pulse rated porcelain medium base socket pre-wired to ballast at factory.

10. Ballast - (Not shown) A high efficiency, pulse start, core and coil ballast regulates voltage for H.I.D. lamp. Consult factory for detailed ballast information.

Exterior Luminaire Finish - Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultra violet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide. Hot Dip Galvanized finish (GV) on all steel parts also available.

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TEL (845) 691-7723
FAX (845) 691-6749
www.selux.us
BP-0712-01 (ss-V6.2)

NRTL Listed (i.e. UL, CSA)

Union Made Affiliated with **IBEW** *Local 363*

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Beta Pendant

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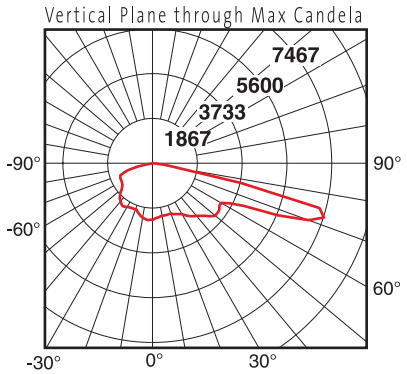
Photometry

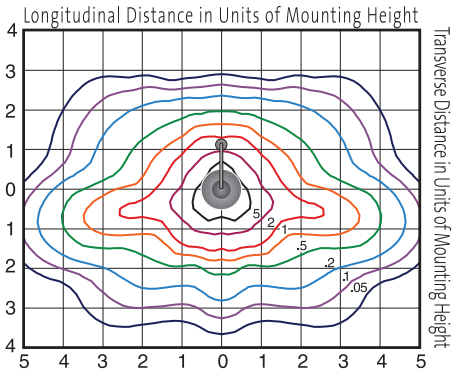
Closed Version / Tempered Flat Glass Lens / R2 Reflector / 150w MH

Catalog # BPC-L-R2-1-H150
Report # 2410 / SX-870AN3

- Precision formed aluminum reflector with specular "kick"reflectors to precisely control distribution.
- Ideal for applications demanding max. spacing.
- Maximum candela of 7467 at 72.5° from vertical.
- IES classification - Type II Full Cutoff.
- IDA-Approved™ dark sky friendly.

DOWNLOAD IES FILE:
http://www.selux.com/cms/products/exterior/ies/beta_pendant/BPC-L-R2-1-H150.zip



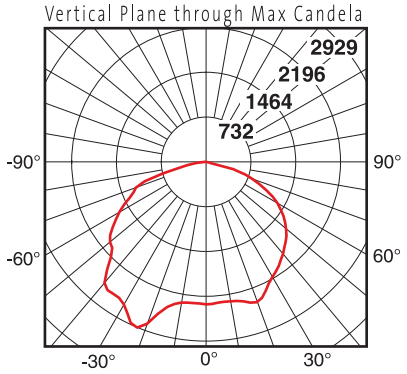


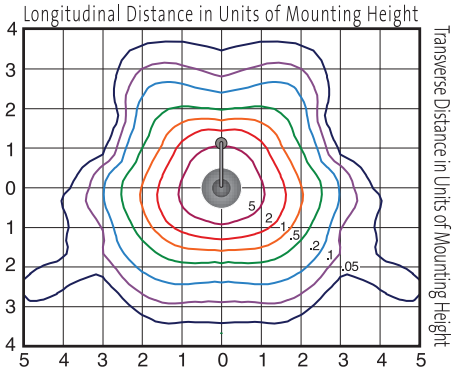
Closed Version / Tempered Flat Glass Lens / R3 Reflector /150w MH

Catalog # BPC-L-R3-1-H150
Report # LSI-13535

- Precision formed aluminum reflector with specular "kick"reflectors to precisely control distribution.
- Ideal for applications demanding max. spacing.
- Maximum candela of 2929 at -22.5° from vertical.
- IES classification - Type II Full Cutoff.
- IDA-Approved™ dark sky friendly.

DOWNLOAD IES FILE:
http://www.selux.com/cms/products/exterior/ies/beta_pendant/BPC-L-R3-1-H150.zip



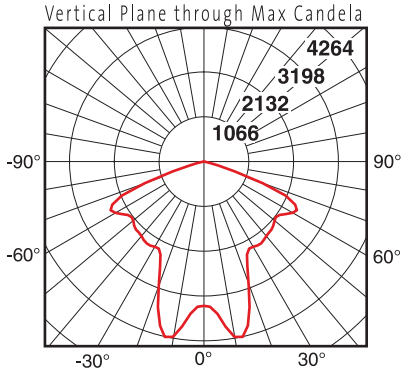


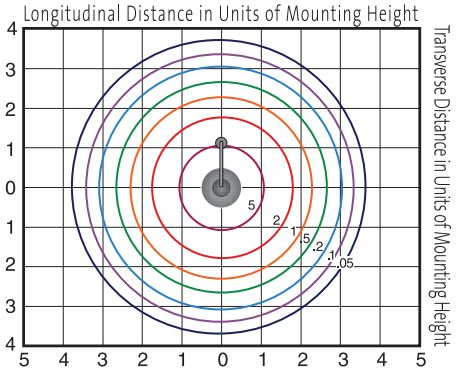
Closed Version / Tempered Flat Glass Lens / R5 Reflector / 150w MH

Catalog # BPC-L-R5-1-H150
Report # LSI-13593

- Precision formed aluminum reflector with vertical, base-up lamp.
- Ideal for applications demanding a uniform symmetric light distribution.
- Maximum candela of 4264 at 12.5° and -12.5° from vertical.
- IES classification - Type V Full Cutoff.
- IDA-Approved™ dark sky friendly.

DOWNLOAD IES FILE:
http://www.selux.com/cms/products/exterior/ies/beta_pendant/BPC-L-R5-1-H150.zip





HID Lamp Prorate Table (ED-17 Clear, Medium-Base Lamp)

High Pressure Sodium			Metal Halide		
Wattage	Factor	Initial Lumens	Wattage	Factor	Initial Lumens
50	0.28	4000	50	0.24	3400
70	0.45	6400	70	0.39	5500
100	0.67	9500	100	0.64	9000
150	1.02	14400	150	1.00	14000

Conversion Chart
Values based on 12' mounting height.

Mounting Height	Multiply
8'	1.22
10'	1.10
12'	1.00
14'	0.93
16'	0.87

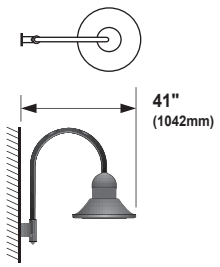
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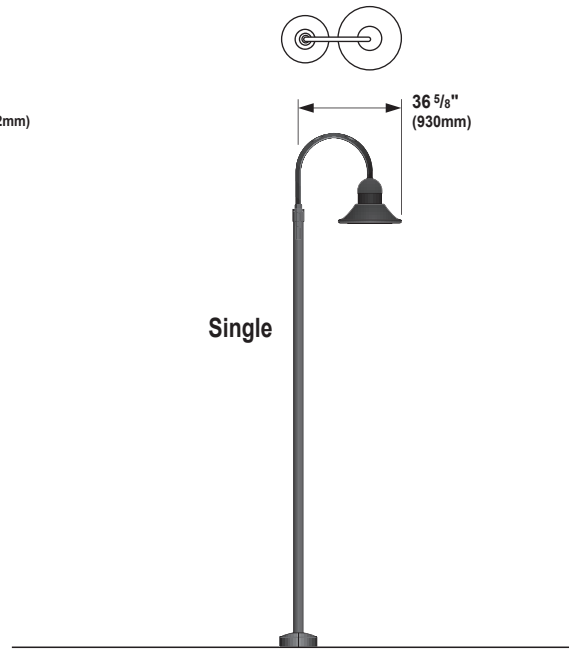
Beta Pendant

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Mounting



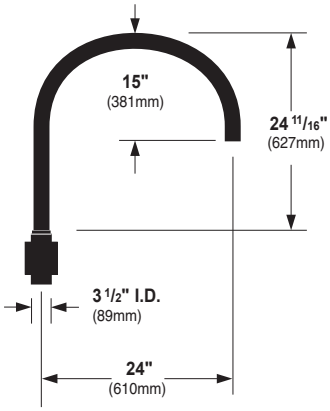
Wall Mount



Single

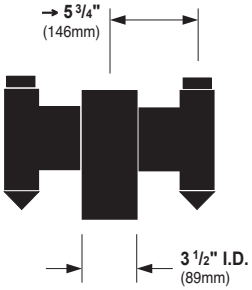
Arm

Curved steel tubing supplied with fixture head. Arm radius = 12" (305mm). Steel fitter slips over pole and is secured with (3) stainless steel screws.



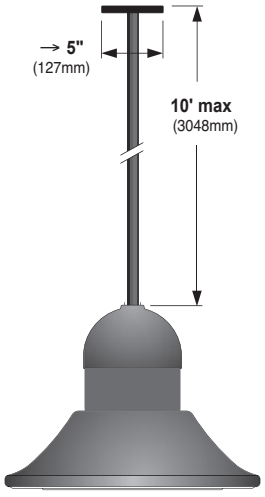
Multiple Pole Fitter

Fabricated steel fitter base and transition to pole. Secured to pole with (4) stainless steel Allen head set screws. Decorative caps at bottom of mounting arm locations are formed aluminum and drilled for water drainage.



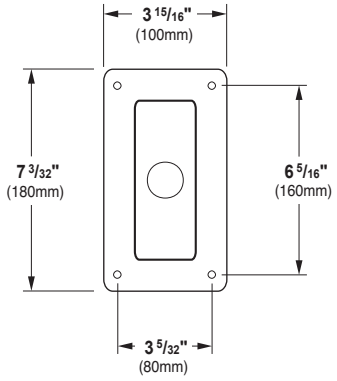
Stem for Pendant Mount

3/4" NPT steel threaded pipe. Specify stem length (10' max.) Formed steel canopy (→ 5.0" / 12.7mm) supplied with crossbar for junction box mounting. Junction box to be secured for load bearing requirements appropriate to local codes.



Wall Mount Back Plate

Fabricated steel mounting. Secured to wall with 5/16" (8mm) diameter fasteners (by others).



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Beta Pendant

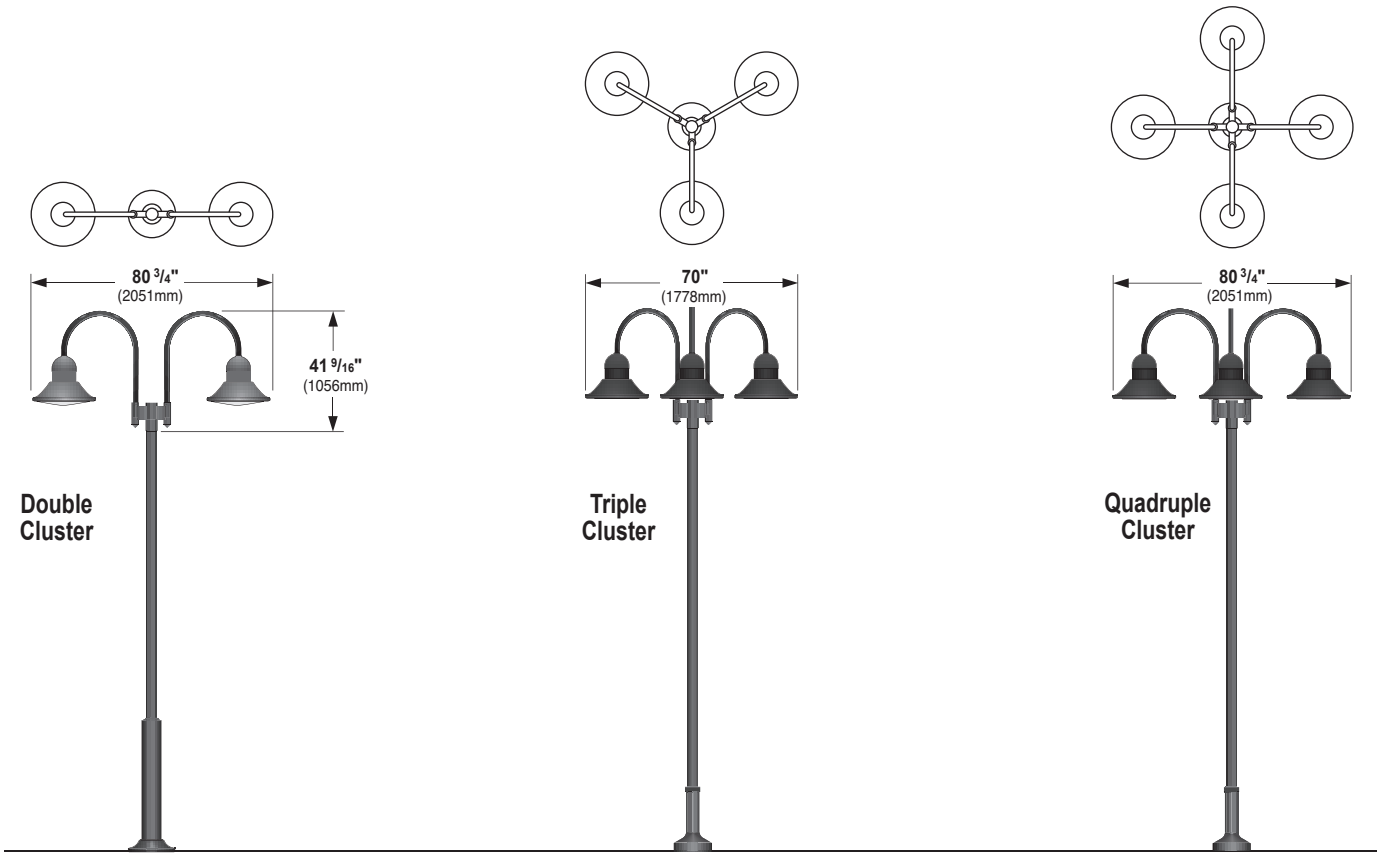
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Mounting

Double
Die-cast aluminum double round luminaire mounting arms secured to pole with four stainless steel, Allen head set screws. Outer slip fitter for 3 1/2" tenon.

Triple
Die-cast aluminum triple round luminaire mounting arms secured to pole with four stainless steel, Allen head set screws. Outer slip fitter for 3 1/2" tenon.

Quad
Die-cast aluminum quadruple round luminaire mounting arms secured to pole with four stainless steel, Allen head set screws. Outer slip fitter for 3 1/2" tenon.



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Beta Pendant

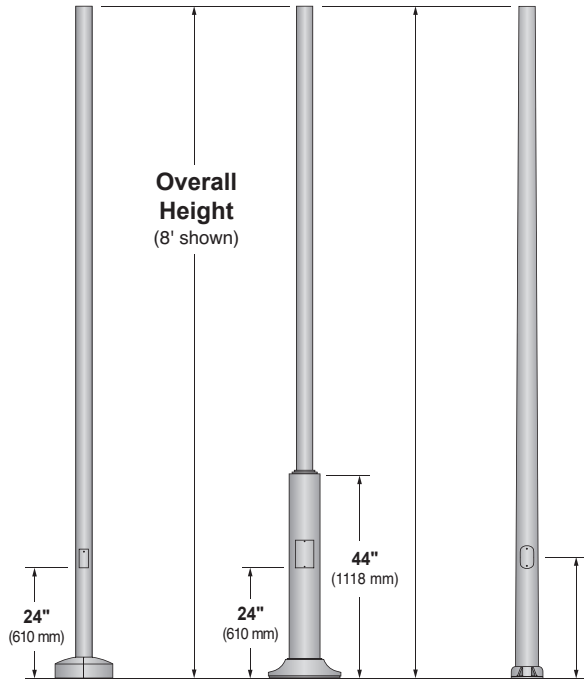
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Pole Information

Refer to A35, S635, or S35 Pole specification sheets for construction details, anchorage information and additional options.

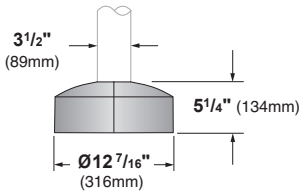
A35 & S35
Round Straight Aluminum & Round Straight Steel Poles

S635
Round Stepped Steel Pole

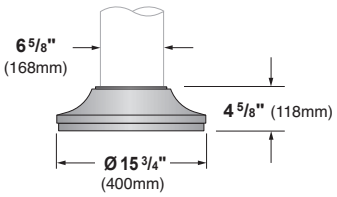


Shown with standard base covers.

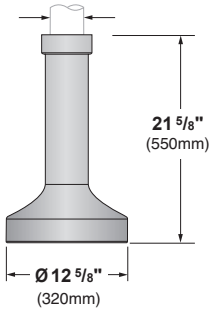
Straight Poles (A35 & S35)
BC5 Standard Base Cover
Two-piece cast aluminum



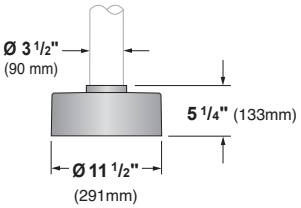
Stepped Steel Pole (S635)
BC6 Standard Base Cover
One-piece cast aluminum



BC1 Optional Base Cover
(A35 & S35) One-piece cast aluminum



BC4 Optional Base Cover
(A35 & S35) One-piece cast aluminum



Pole Series	Bolt Circle	EPA Information (ft^2) 70 mph	80 mph	90 mph	100 mph	110 mph	Height	Finish	Options
S635 3 1/2" Diameter Stepped Steel Pole	9"	57.6	44.3	34.6	27.5	22.8		**WH** White **BK** Black **BZ** Bronze **SV** Silver **SP** Specify Premium Color	**BC1** Decorative Cast Aluminum Base Cover (for A35 & S35 poles only) **BC4** One-piece Cast Aluminum Base Cover (for A35 & S35 poles only) **REC** GFCI Receptacle with weather-proof cover* **For Photocell option, see p.1** *** Weatherproof cover intended for portable tools or other portable equipment connected to the outlet only when attended. For other requirements please consult factory.**
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	16.1	12.2	9.4	7.3	5.9	**8** 8 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	14.8	11.3	8.6	6.7	5.4			
S635 3 1/2" Diameter Stepped Steel Pole	9"	45.6	35.0	27.3	21.6	17.8			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	12.4	9.3	7.1	5.4	4.3	**10** 10 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	11.4	8.6	6.5	4.9	3.9			
S635 3 1/2" Diameter Stepped Steel Pole	9"	37.6	28.7	22.3	17.5	14.4			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	9.9	7.3	5.4	4.0	3.1	**12** 12 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	9.1	6.7	4.9	3.6	2.8			
S635 3 1/2" Diameter Stepped Steel Pole	9"	31.7	24.2	18.6	14.6	11.9			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	8.0	5.8	4.2	3.0	2.2	**14** 14 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	7.3	5.3	3.8	2.7	1.9			
S635 3 1/2" Diameter Stepped Steel Pole	9"	21.7	15.8	12.3	9.6	7.6			
A35 3 1/2" Diameter Straight Aluminum Pole	7 3/4"	4.9	3.2	2.2	1.4	0.8	**16** 16 ft.		
S35 3 1/2" Diameter Straight Steel Pole	7 3/4"	4.4	2.8	1.9	1.2	0.6			

Other pole configurations available, consult factory. EPA Calculations allow for 1.3 Gust Factor

Effective Projected Area of Single Luminaire = 1.38 ft^2 (0.13m^2) / Weight of Luminaire = 27.5 lbs (12.5kg) (Includes Mounting Arm)
Effective Projected Area of Double Luminaire = 3.72 ft^2 (0.35m^2) / Weight of Double Luminaire (includes arms) = 81.0 lbs (36.7kg)

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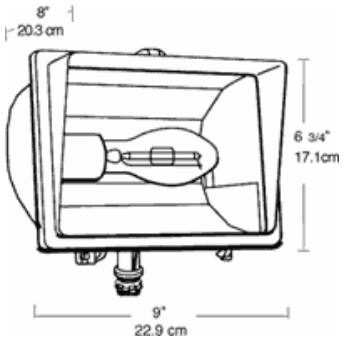
FF50/PCS

Compact, tough and good looking cast aluminum housing with hinged framed glass lens. Integra Hood glare shield and stainless steel clip. 35 to 150 watt HPS, 50 & 70 watt Pulse Start Metal Halide. Lamp supplied.

Color: Bronze

Weight: 6.2 lbs





Lamp Info

Type:	ED17
Watts:	50
Shape/Size:	N/A
Base:	N/A
ANSI:	N/A
Hours:	24,000
Lamp Lumens:	4,000
Efficacy:	65 LPW

Ballast Info

Type:	R-NPF 120V
120V:	1.8/1.2
208V:	N/A
240V:	N/A
277V:	N/A
Input Watts:	62W
Efficiency:	81%

Technical Specifications

UL Listing:
Suitable for wet locations. Suitable for mounting within 4' of the ground

Sockets:
Porcelain with all copper current carrying components

Housing:
Precision die cast aluminum, 1/2" NPS threaded arm with locking swivel fits all standard mounting boxes

Reflector:
Anodized semi-specular aluminum

Lens:
Thermal tempered shock resistant glass

Lens Gasket:
High temperature tubular silicone set in die cast retaining groove remains in place during relamping

Socket:
Glazed porcelain 4kv pulse rated with nickel plated screw shell and spring contacts

Finish:
Chip and fade resistant polyester powder coating

Photocell:
Swivel Photocell

EPA:
0.43

Patents:
Pat. D420,458

Country of Origin:
Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:
This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods--Buy American Act-- Construction Materials (October 2010)

Trade Agreements Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:
Suitable in accordance with FAR Subpart 25.4

:

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CRI Lighting Sales
sustainable lighting is our future
www.crilighting.com

SUBMITTAL COVER SHEET

DATE: 04/25/2013

Project: CHINESE CHURCH

Attn: NICK BERNABE - ROCK ELECTRIC

TYPE	MANUFACTURER	CATALOG NUMBER
4M-D HEAD	CREE	ARE-EDG-4M-DA-04-D-UL-SV-350-40K
4M-D POLE	GEN.STRUCT	CPS-1-4011-22-D1-SL
3M-D HEAD	CREE	ARE-EGE-3M-DA-04-D-UL-SV-350-40K
3M-D POLE	GEN.STRUCT	CPS-1-4011-22-D1-SL
3M-D2 HEAD	CREE	(2)ARE-EDG-3M-DA-04-D-UL-SV-350-40K
3M-D2 POLE	GEN.STRUCT	CPS-1-4011-22-D2(180)-SL
3MB-D HEAD	CREE	ARE-EDG-3MB-DA-04-D-UL-SV-350-40K
3MB-D POLE	GEN.STRUCT	CPS-1-4011-22-D1-SL
5M-D2 HEAD	CREE	(2) ARE-EDG-5M-DA-04-D-UL-SV-350-40K
5M-D2 POLE	GEN.STRUCT	CPS-1-4011-22-D2(180)-SL

7340 Trade Street • Suite B • San Diego, CA 92121
Tel 858-695-8300 • Fax 858-695-0303

THE EDGE® ARE-EDG-4M-DA

Area Luminaire – Type IV Medium – Direct Arm Mount

JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH

TYPE 4M - D HEAD

Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heat sinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3-6" (76-152mm) square or round pole. Luminaire is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers.



Performance Summary

Utilizes BetaLED® Technology

Patented NanoOptic® Product Technology

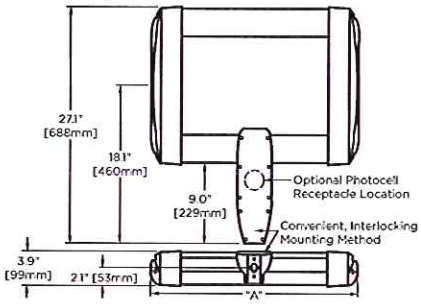
Made in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

CCT: 5700K (+/- 500K) Standard, 4000K (+/- 300K)

Warranty: 5 years on luminaire / 10 years on Colorfast DeltaGuard® finish

EPA and Weight: Reference EPA and Weight spec sheet



LED Count (x10)	Dim. "A"
02	12.1" [306mm]
04	12.1" [306mm]
06	14.1" [357mm]
08	16.1" [408mm]
10	18.1" [459mm]
12	20.1" [510mm]
14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes

Ordering Information

Example: ARE-EDG-4M-DA-02-D-UL-SV-350-OPTIONS

ARE-EDG	4M	DA	04	D	UL	SV	350	40K
Product	Optic	Mounting	LED Count (x10)	Version	Voltage	Color Options	Drive Current	Options
ARE-EDG	**4M** Type IV Medium	**DA** Direct Arm	**02** **04** **06** **08** **10** **12** **14** **16** **20** **24**	**D**	**UL** Universal 120-277V **UH** Universal 347-480V **34** 347V	**SV** Silver (Standard) **BK** Black **BZ** Bronze **PB** Platinum Bronze **WH** White	**350** 350mA **525*** 525mA **700**** 700mA	**40K 4000K Color Temperature** - Color temperature per luminaire **DIM 0-10V Dimming** - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F Fuse** - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options **HL Hi / Low (175/350/525 Dual Circuit Input)** - Refer to ML spec sheet for details - Sensor not included **P Photocell** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specifiy voltage other than UH **R NEMA Photocell Receptacle** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Intended for horizontal mounting - Photocell by others **ML Multi-Level** - Refer to ML spec sheet for details

* Available on luminaires with 20-160 LEDs
** Available on luminaires with 20-60 LEDs

BetaLED TECHNOLOGY

Rev. Date: 6/26/2012

CREE®

Area Luminaire – Type IV Medium – Direct Arm Mount

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks
- Convenient interlocking mouting method. Mounting housing is rugged die cast aluminum mounting to 3-6" (76-152mm) square or round pole, secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weather-tight electrical box with terminal strips (12Ga-20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

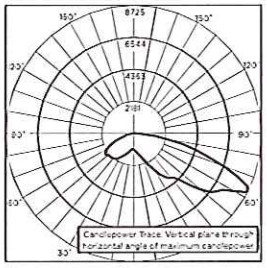
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium ("DLC") Qualified Products List ("QPL") when ordered without the backlight control shield
- Dark Sky Friendly, IDA Approved
- RoHS Compliant
- Meets Buy American requirements within ARRA

PATENTS

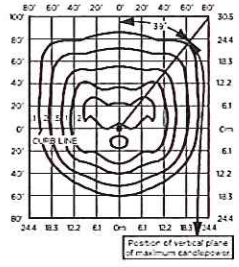
- Visit website for patents that cover these products: Patents http://www.cree.com/patents

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by Independent Testing Laboratories, a NVLAP certified laboratory.



ITL Test Report #: 68090
ARE-EDG-4M-**-12-D-UL-525-43K
Initial Delivered Lumens: 14,934



ARE-EDG-4M-**-12-D-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 14,583
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type IV Medium Distribution

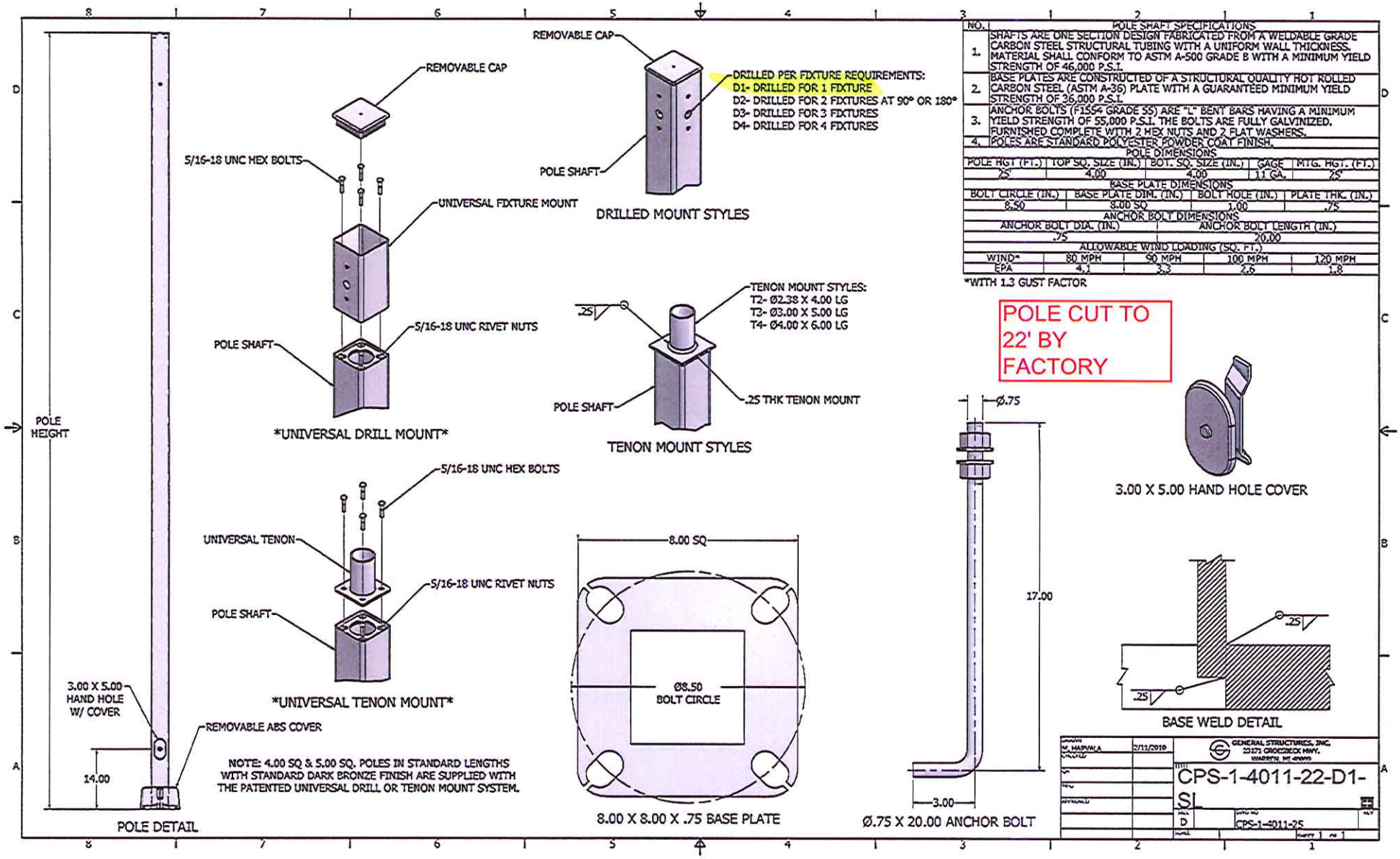
LED Count (x10)	5700K Initial Delivered Lumens	5700K BUG Ratings* Per TM-15-11	4000K Initial Delivered Lumens	4000K BUG Ratings* Per TM-15-11	System Watts 120-480V	TOTAL CURRENT 120V	208V	240V	277V	347V	480V	50K Hours Projected Lumen Maintenance Factor @ 15°C (59°F)**
350mA @ 25°C (77°F)												
02	1,913	B1 U0 G1	1,763	B1 U0 G1	26	0.20	0.13	0.11	0.10	0.09	0.07	
04	3,826	B1 U0 G1	3,526	B1 U0 G1	47	0.40	0.24	0.21	0.19	0.15	0.12	
06	5,665	B2 U0 G2	5,221	B2 U0 G1	68	0.58	0.34	0.30	0.26	0.20	0.16	
08	7,554	B2 U0 G2	6,962	B2 U0 G2	90	0.77	0.44	0.38	0.34	0.26	0.20	
10	9,419	B2 U0 G2	8,681	B2 U0 G2	111	0.95	0.55	0.47	0.42	0.32	0.24	93%
12	11,302	B3 U0 G3	10,417	B2 U0 G2	132	1.15	0.66	0.56	0.50	0.38	0.28	
14	13,126	B3 U0 G3	12,098	B3 U0 G3	157	1.34	0.78	0.67	0.61	0.47	0.35	
16	15,001	B3 U0 G3	13,826	B3 U0 G3	179	1.54	0.89	0.76	0.68	0.53	0.39	
20	18,752	B3 U0 G3	17,282	B3 U0 G3	221	1.92	1.10	0.95	0.84	0.65	0.48	
24	22,502	B3 U0 G3	20,739	B3 U0 G3	264	2.30	1.31	1.12	1.00	0.77	0.56	
525mA @ 25°C (77°F)												
02	2,678	B1 U0 G1	2,469	B1 U0 G1	37	0.31	0.19	0.17	0.16	0.12	0.10	
04	5,357	B2 U0 G1	4,937	B2 U0 G1	70	0.57	0.33	0.29	0.26	0.21	0.16	
06	7,932	B2 U0 G2	7,310	B2 U0 G2	102	0.87	0.50	0.44	0.39	0.30	0.22	
08	10,575	B2 U0 G2	9,747	B2 U0 G2	133	1.14	0.65	0.56	0.49	0.39	0.29	92%
10	13,186	B3 U0 G3	12,153	B3 U0 G3	172	1.47	0.85	0.75	0.67	0.51	0.38	
12	15,823	B3 U0 G3	14,583	B3 U0 G3	204	1.76	1.01	0.88	0.78	0.60	0.44	
14	18,377	B3 U0 G3	16,937	B3 U0 G3	233	2.01	1.14	0.99	0.87	0.69	0.51	
16	21,002	B3 U0 G3	19,356	B3 U0 G3	265	2.29	1.29	1.11	0.98	0.78	0.57	
700mA @ 25°C (77°F)												
02	3,271	B1 U0 G1	3,015	B1 U0 G1	50	0.42	0.25	0.22	0.20	0.15	0.12	90%
04	6,543	B2 U0 G2	6,030	B2 U0 G2	93	0.79	0.45	0.40	0.35	0.27	0.20	
06	9,688	B2 U0 G2	8,929	B2 U0 G2	137	1.18	0.67	0.59	0.51	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf
** Projected L_{70} (10K) Hours: >60,000. For recommended lumen maintenance factor data see TD-13

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www.cree.com/lighting T (800) 236-6800 F (262) 504-5415

JOB NAME: CHINESE CHURCH
TYPE: 4M-D POLE
CAT.# CPS-1-4011-22-D1-SL



NOTE: 4.00 SQ & 5.00 SQ. POLES IN STANDARD LENGTHS WITH STANDARD DARK BRONZE FINISH ARE SUPPLIED WITH THE PATENTED UNIVERSAL DRILL OR TENON MOUNT SYSTEM.

NO.	POLE SHAFT SPECIFICATIONS
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.
2.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL (ASTM A-36) PLATE WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.
3.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVINIZED. FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.
4.	POLES ARE STANDARD POLYESTER POWDER COAT FINISH.

POLE DIMENSIONS			
POLE HGT (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
25'	4.00	4.00	11 GA.	25'

BASE PLATE DIMENSIONS			
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)
8.50	8.00 SQ	1.00	.75

ANCHOR BOLT DIMENSIONS	
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)
.75	20.00

ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	4.1	3.3	2.6	1.8

*WITH 1.3 GUST FACTOR

POLE CUT TO 22' BY FACTORY

M. HARVALA	2/11/2010	GENERAL STRUCTURES, INC. 25171 CROSSROCK HWY. WARREN, MT 49099	
		CPS-1-4011-22-D1-SL	
		D	CPS-1-4011-25

THE EDGE® ARE-EDG-3M-DA

Area Luminaire – Type III Medium – Direct Arm Mount

JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH

TYPE: 3M - D HEAD

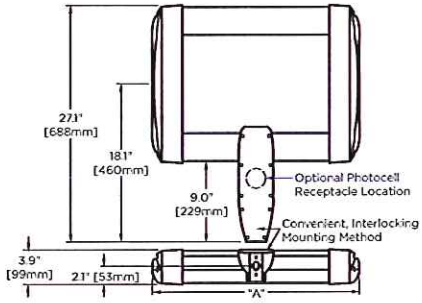
Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heat sinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3-6" (76-152mm) square or round pole. Luminaire is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers.



Performance Summary

- Utilizes BetaLED® Technology
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 5700K (+/- 500K) Standard, 4000K (+/- 300K)
- **Warranty:** 5 years on luminaire / 10 years on Colorfast DeltaGuard® finish
- **EPA and Weight:** Reference EPA and Weight spec sheet



LED Count (x10)	Dim. "A"
02	12.1" [306mm]
04	12.1" [306mm]
06	14.1" [357mm]
08	16.1" [408mm]
10	18.1" [459mm]
12	20.1" [510mm]
14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes

Ordering Information

Example: ARE-EDG-3M-DA-02-D-UL-SV-350-OPTIONS

ARE-EDG	3M	DA	04	D	UL	SV	350	40K
Product	Optic	Mounting	LED Count (x10)	Version	Voltage	Color Options	Drive Current	Options
ARE-EDG	**3M** Type III Medium	**DA** Direct Arm	**02** **04** **06** **08** **10** **12** **14** **16** **20** **24**	**D**	**UL** Universal 120-277V **UH** Universal 347-480V **34** 347V	**SV** Silver (Standard) **BK** Black **BZ** Bronze **PB** Platinum Bronze **WH** White	**350** 350mA **525*** 525mA **700**** 700mA	**40K 4000K Color Temperature** - Color temperature per luminaire **DIM 0-10V Dimming** - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F Fuse** - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options **HL Hi / Low (175/350/525 Dual Circuit Input)** - Refer to ML spec sheet for details - Sensor not included **P Photocell** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specifiy voltage other than UH **R NEMA Photocell Receptacle** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Intended for horizontal mounting - Photocell by others **ML Multi-Level** - Refer to ML spec sheet for details

* Available on luminaires with 20-160 LEDs
** Available on luminaires with 20-60 LEDs

Rev. Date: 6/26/2012

Area Luminaire – Type III Medium – Direct Arm Mount

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks
- Convenient interlocking mouting method. Mounting housing is rugged die cast aluminum mounting to 3-6" (76-152mm) square or round pole, secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weather-tight electrical box with terminal strips (12Ga-20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

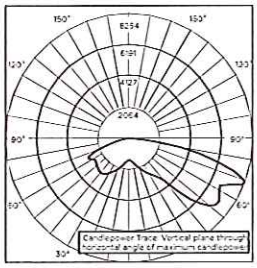
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium ("DLC") Qualified Products List ("QPL") when ordered without the backlight control shield
- Dark Sky Friendly, IDA Approved
- RoHS Compliant
- Meets Buy American requirements within ARRA

PATENTS

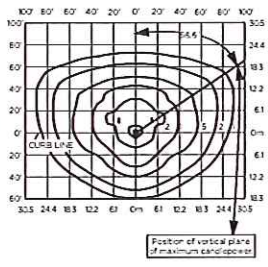
- Visit website for patents that cover these products: Patents http://www.cree.com/patents

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by Independent Testing Laboratories, a NVLAP certified laboratory.



ITL Test Report #: 67871
ARE-EDG-3M-**-16-D-UL-525-43K
Initial Delivered Lumens: 18,862



ARE-EDG-3M-**-12-D-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 13,826
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

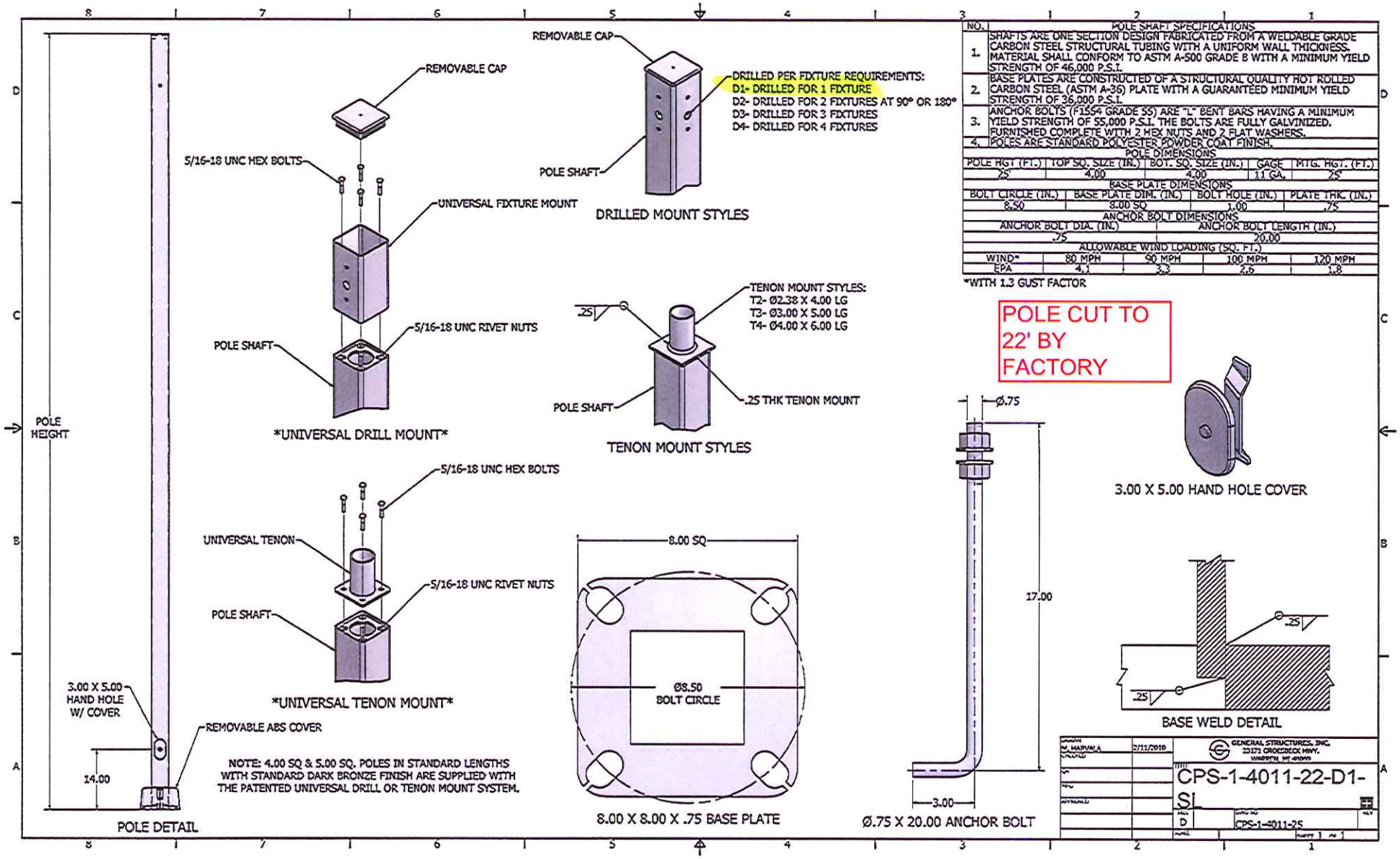
Type III Medium Distribution												
LED Count (x10)	5700K		4000K		System Watts 120-480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15°C (59°F)**
	Initial Delivered Lumens	BUG Ratings* Per TM-15-11	Initial Delivered Lumens	BUG Ratings* Per TM-15-11		120V	208V	240V	277V	347V	480V	
350mA @ 25°C (77°F)												
02	1,814	B1 U0 G1	1,672	B1 U0 G1	26	0.20	0.13	0.11	0.10	0.09	0.07	93%
04	3,628	B1 U0 G1	3,343	B1 U0 G1	47	0.40	0.24	0.21	0.19	0.15	0.12	
06	5,371	B2 U0 G2	4,950	B2 U0 G2	68	0.58	0.34	0.30	0.26	0.20	0.16	
08	7,161	B2 U0 G2	6,600	B2 U0 G2	90	0.77	0.44	0.38	0.34	0.26	0.20	
10	8,929	B3 U0 G3	8,230	B2 U0 G2	111	0.95	0.55	0.47	0.42	0.32	0.24	
12	10,715	B3 U0 G3	9,876	B3 U0 G3	132	1.15	0.66	0.56	0.50	0.38	0.28	
14	12,444	B3 U0 G3	11,469	B3 U0 G3	157	1.34	0.78	0.67	0.61	0.47	0.35	
16	14,222	B3 U0 G3	13,108	B3 U0 G3	179	1.54	0.89	0.76	0.68	0.53	0.39	
20	17,778	B3 U0 G3	16,385	B3 U0 G3	221	1.92	1.10	0.95	0.84	0.65	0.48	
24	21,333	B4 U0 G4	19,662	B3 U0 G3	264	2.30	1.31	1.12	1.00	0.77	0.56	
525mA @ 25°C (77°F)												
02	2,539	B1 U0 G1	2,340	B1 U0 G1	37	0.31	0.19	0.17	0.16	0.12	0.10	92%
04	5,079	B2 U0 G2	4,681	B2 U0 G2	70	0.57	0.33	0.29	0.26	0.21	0.16	
06	7,520	B2 U0 G2	6,930	B2 U0 G2	102	0.87	0.50	0.44	0.39	0.30	0.22	
08	10,026	B3 U0 G3	9,240	B3 U0 G3	133	1.14	0.65	0.56	0.49	0.39	0.29	
10	12,501	B3 U0 G3	11,521	B3 U0 G3	172	1.47	0.85	0.75	0.67	0.51	0.38	
12	15,001	B3 U0 G3	13,826	B3 U0 G3	204	1.76	1.01	0.88	0.78	0.60	0.44	
14	17,422	B3 U0 G3	16,057	B3 U0 G3	233	2.01	1.14	0.99	0.87	0.69	0.51	
16	19,911	B3 U0 G3	18,351	B3 U0 G3	265	2.29	1.29	1.11	0.98	0.78	0.57	
700mA @ 25°C (77°F)												
02	3,102	B1 U0 G1	2,858	B1 U0 G1	50	0.42	0.25	0.22	0.20	0.15	0.12	90%
04	6,203	B2 U0 G2	5,717	B2 U0 G2	93	0.79	0.45	0.40	0.35	0.27	0.20	
06	9,185	B3 U0 G3	8,465	B3 U0 G3	137	1.18	0.67	0.59	0.51	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf
** Projected L_{70} (10K) Hours: >60,000. For recommended lumen maintenance factor data see TD-13

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www.cree.com/lighting T (800) 236-6800 F (262) 504-5415

JOB NAME: CHINESE CHURCH
TYPE: 3M-D POLE
CAT.# CPS-1-4011-22-D1-SL



NO.	POLE SHAFT SPECIFICATIONS
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.
2.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL (ASTM A-36) PLATE WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.
3.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVINIZED. FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.
4.	POLES ARE STANDARD POLYESTER POWDER COAT FINISH.

POLE DIMENSIONS			
POLE HGT (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
25'	4.00	4.00	11 GA.	25'

BASE PLATE DIMENSIONS			
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)
8.50	8.00 SQ	1.00	.75

ANCHOR BOLT DIMENSIONS	
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)
.75	20.00

ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	4.1	3.3	2.6	1.8

*WITH 1.3 GUST FACTOR

POLE CUT TO 22' BY FACTORY

NOTE: 4.00 SQ & 5.00 SQ. POLES IN STANDARD LENGTHS WITH STANDARD DARK BRONZE FINISH ARE SUPPLIED WITH THE PATENTED UNIVERSAL DRILL OR TENON MOUNT SYSTEM.

M. HARVALA	2/11/2010	GENERAL STRUCTURES, INC. 53171 CROSSCREEK HWY. WARREN, MT 49089
		CPS-1-4011-22-D1-SL
		D
		CPS-1-4011-25

THE EDGE® ARE-EDG-3M-DA

Area Luminaire – Type III Medium – Direct Arm Mount

JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH

TYPE: 3M - D2 HEAD

Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heat sinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3-6" (76-152mm) square or round pole. Luminaire is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers.



Performance Summary

Utilizes BetaLED® Technology

Patented NanoOptic® Product Technology

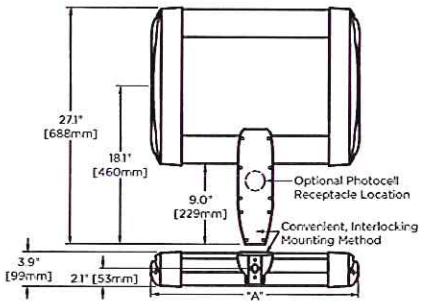
Made in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

CCT: 5700K (+/- 500K) Standard, 4000K (+/- 300K)

Warranty: 5 years on luminaire / 10 years on Colorfast DeltaGuard® finish

EPA and Weight: Reference EPA and Weight spec sheet



LED Count (x10)	Dim. "A"
02	12.1" [306mm]
04	12.1" [306mm]
06	14.1" [357mm]
08	16.1" [408mm]
10	18.1" [459mm]
12	20.1" [510mm]
14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes

DBL SET-UP = (2)

Ordering Information

Example: ARE-EDG-3M-DA-02-D-UL-SV-350-OPTIONS

ARE-EDG	3M	DA	04	D	UL	SV	350	40K
Product	Optic	Mounting	LED Count (x10)	Version	Voltage	Color Options	Drive Current	Options
ARE-EDG	3M Type III Medium	DA Direct Arm	02 04 06 08 10 12 14 16 20 24	D	UL Universal 120-277V UH Universal 347-480V 34 347V	SV Silver (Standard) BK Black BZ Bronze PB Platinum Bronze WH White	350 350mA 525* 525mA 700** 700mA	40K 4000K Color Temperature - Color temperature per luminaire DIM 0-10V Dimming - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current F Fuse - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options HL Hi / Low (175/350/525 Dual Circuit Input) - Refer to ML spec sheet for details - Sensor not included P Photocell - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specifiy voltage other than UH R NEMA Photocell Receptacle - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Intended for horizontal mounting - Photocell by others ML Multi-Level - Refer to ML spec sheet for details

* Available on luminaires with 20-160 LEDs
** Available on luminaires with 20-60 LEDs

BetaLED TECHNOLOGY

RoHS

c UL us

Rev. Date: 6/26/2012

CREE®

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Area Luminaire – Type III Medium – Direct Arm Mount

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks
- Convenient interlocking mouting method. Mounting housing is rugged die cast aluminum mounting to 3-6" (76-152mm) square or round pole, secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weather-tight electrical box with terminal strips (12Ga-20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

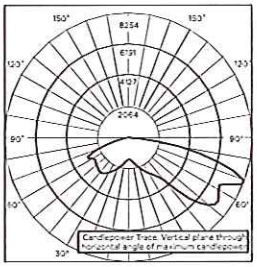
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium ("DLC") Qualified Products List ("QPL") when ordered without the backlight control shield
- Dark Sky Friendly, IDA Approved
- RoHS Compliant
- Meets Buy American requirements within ARRA

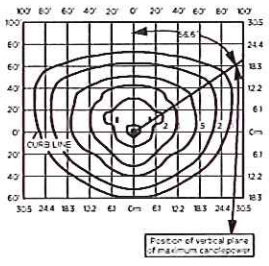
PATENTS

- Visit website for patents that cover these products: Patents http://www.cree.com/patents

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by Independent Testing Laboratories, a NVLAP certified laboratory.





ITL Test Report #: 67871
ARE-EDG-3M-**-16-D-UL-525-43K
Initial Delivered Lumens: 18,862

ARE-EDG-3M-**-12-D-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 13,826
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

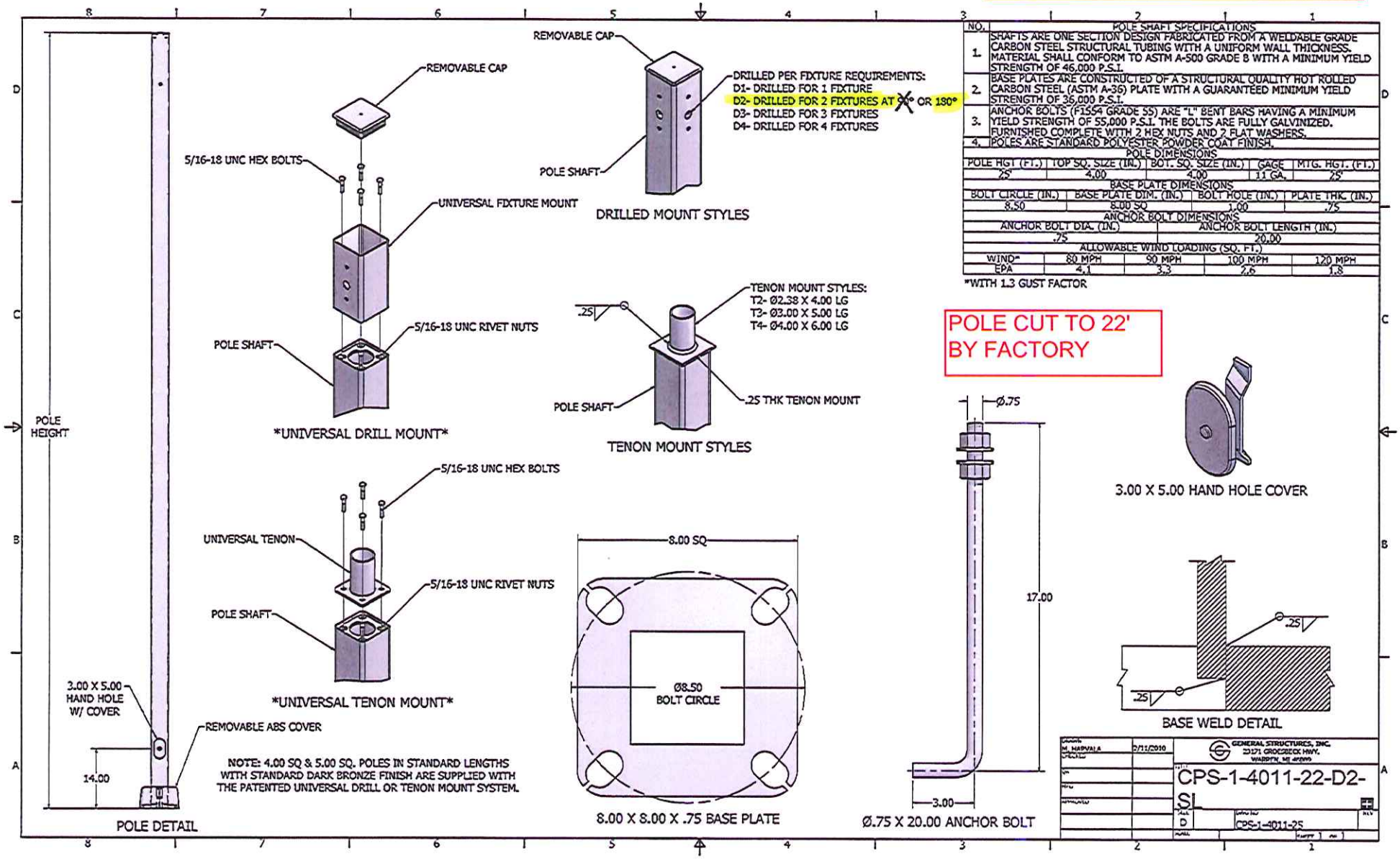
Type III Medium Distribution												
LED Count (x10)	5700K		4000K		System Watts 120-480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15°C (59°F)**
	Initial Delivered Lumens	BUG Ratings* Per TM-15-11	Initial Delivered Lumens	BUG Ratings* Per TM-15-11		120V	208V	240V	277V	347V	480V	
350mA @ 25°C (77°F)												
02	1,814	B1 U0 G1	1,672	B1 U0 G1	26	0.20	0.13	0.11	0.10	0.09	0.07	93%
04	3,628	B1 U0 G1	3,343	B1 U0 G1	47	0.40	0.24	0.21	0.19	0.15	0.12	
06	5,371	B2 U0 G2	4,950	B2 U0 G2	68	0.58	0.34	0.30	0.26	0.20	0.16	
08	7,161	B2 U0 G2	6,600	B2 U0 G2	90	0.77	0.44	0.38	0.34	0.26	0.20	
10	8,929	B3 U0 G3	8,230	B2 U0 G2	111	0.95	0.55	0.47	0.42	0.32	0.24	
12	10,715	B3 U0 G3	9,876	B3 U0 G3	132	1.15	0.66	0.56	0.50	0.38	0.28	
14	12,444	B3 U0 G3	11,469	B3 U0 G3	157	1.34	0.78	0.67	0.61	0.47	0.35	
16	14,222	B3 U0 G3	13,108	B3 U0 G3	179	1.54	0.89	0.76	0.68	0.53	0.39	
20	17,778	B3 U0 G3	16,385	B3 U0 G3	221	1.92	1.10	0.95	0.84	0.65	0.48	
24	21,333	B4 U0 G4	19,662	B3 U0 G3	264	2.30	1.31	1.12	1.00	0.77	0.56	
525mA @ 25°C (77°F)												
02	2,539	B1 U0 G1	2,340	B1 U0 G1	37	0.31	0.19	0.17	0.16	0.12	0.10	92%
04	5,079	B2 U0 G2	4,681	B2 U0 G2	70	0.57	0.33	0.29	0.26	0.21	0.16	
06	7,520	B2 U0 G2	6,930	B2 U0 G2	102	0.87	0.50	0.44	0.39	0.30	0.22	
08	10,026	B3 U0 G3	9,240	B3 U0 G3	133	1.14	0.65	0.56	0.49	0.39	0.29	
10	12,501	B3 U0 G3	11,521	B3 U0 G3	172	1.47	0.85	0.75	0.67	0.51	0.38	
12	15,001	B3 U0 G3	13,826	B3 U0 G3	204	1.76	1.01	0.88	0.78	0.60	0.44	
14	17,422	B3 U0 G3	16,057	B3 U0 G3	233	2.01	1.14	0.99	0.87	0.69	0.51	
16	19,911	B3 U0 G3	18,351	B3 U0 G3	265	2.29	1.29	1.11	0.98	0.78	0.57	
700mA @ 25°C (77°F)												
02	3,102	B1 U0 G1	2,858	B1 U0 G1	50	0.42	0.25	0.22	0.20	0.15	0.12	90%
04	6,203	B2 U0 G2	5,717	B2 U0 G2	93	0.79	0.45	0.40	0.35	0.27	0.20	
06	9,185	B3 U0 G3	8,465	B3 U0 G3	137	1.18	0.67	0.59	0.51	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf
** Projected L_{70} (10K) Hours: >60,000. For recommended lumen maintenance factor data see TD-13

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JOB NAME: CHINESE CHURCH
TYPE: 3M-D2 POLE
CAT.# CPS-1-4011-22-D2(180)-SL



NO.	POLE SHAFT SPECIFICATIONS
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.
2.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL (ASTM A-36) PLATE WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.
3.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVINIZED. FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.
4.	POLES ARE STANDARD POLYESTER POWDER COAT FINISH.

POLE DIMENSIONS			
POLE HGT (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
25'	4.00	4.00	11 GA.	25'

BASE PLATE DIMENSIONS			
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)
8.50	8.00 SQ	1.00	.75

ANCHOR BOLT DIMENSIONS	
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)
.75	20.00

ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	4.1	3.3	2.6	1.8

*WITH 1.3 GUST FACTOR

POLE CUT TO 22' BY FACTORY

NOTE: 4.00 SQ & 5.00 SQ. POLES IN STANDARD LENGTHS WITH STANDARD DARK BRONZE FINISH ARE SUPPLIED WITH THE PATENTED UNIVERSAL DRILL OR TENON MOUNT SYSTEM.

M. HAPVALA	2/11/2010	GENERAL STRUCTURES, INC. 2171 CROSSBECK HWY. WARREN, MI 48089
		CPS-1-4011-22-D2-SL
		D — CPS-1-4011-25

THE EDGE® ARE-EDG-3MB/3MP-DA

Area Luminaire – Type III Medium w/ Backlight Control – Direct Arm Mount

JOB NAME: CHINESE CHURCH
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JOB NAME: CHINESE CHURCH

TYPE:3MB -D HEAD

Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heat sinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3-6" (76-152mm) square or round pole. Luminaire is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers.



Performance Summary

Utilizes BetaLED® Technology

Patented NanoOptic® Product Technology

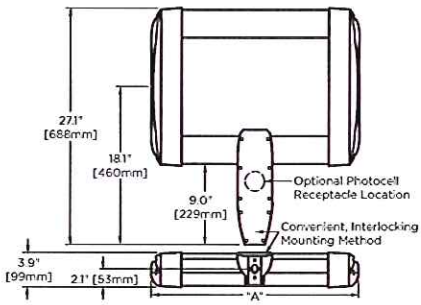
Made in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

CCT: 5700K (+/- 500K) Standard, 4000K (+/- 300K)

Warranty: 5 years on luminaire / 10 years on Colorfast DeltaGuard® finish

EPA and Weight: Reference EPA and Weight spec sheet



LED Count (x10)	Dim. "A"
02	12.1" [306mm]
04	12.1" [306mm]
06	14.1" [357mm]
08	16.1" [408mm]
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14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes

Ordering Information

Example: ARE-EDG-3MB-DA-02-D-UL-SV-350-OPTIONS

ARE-EDG	3MB	DA	04	D	UL	SV	350	40K
Product	Optic	Mounting	LED Count (x10)	Version	Voltage	Color Options	Drive Current	Options
ARE-EDG	**3MB** Type III Medium w/ BLS **3MP** Type III Medium w/ Partial BLS	**DA** Direct Arm	**02** **04** **06** **08** **10** **12** **14** **16** **20** **24**	**D**	**UL** Universal 120-277V **UH** Universal 347-480V **34** 347V	**SV** Silver (Standard) **BK** Black **BZ** Bronze **PB** Platinum Bronze **WH** White	**350** 350mA **525*** 525mA **700**** 700mA	**40K 4000K Color Temperature** - Color temperature per luminaire **DIM 0-10V Dimming** - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F Fuse** - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options **HL Hi / Low (175/350/525 Dual Circuit Input)** - Refer to ML spec sheet for details - Sensor not included **P Photocell** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specify voltage other than UH **R NEMA Photocell Receptacle** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Intended for horizontal mounting - Photocell by others **ML Multi-Level** - Refer to ML spec sheet for details

* Available on luminaires with 20-160 LEDs
** Available on luminaires with 20-60 LEDs

Rev. Date: 7/9/2012

Area Luminaire – Type III Medium w/ Backlight Control – Direct Arm Mount

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks
- Convenient interlocking mouting method. Mounting housing is rugged die cast aluminum mounting to 3-6" (76-152mm) square or round pole, secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weather-tight electrical box with terminal strips (12Ga-20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

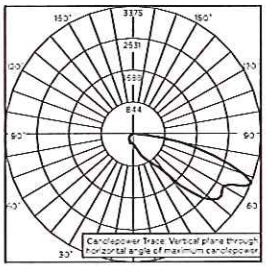
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium ("DLC") Qualified Products List ("QPL") when ordered without the backlight control shield
- Dark Sky Friendly, IDA Approved
- RoHS Compliant
- Meets Buy American requirements within ARRA

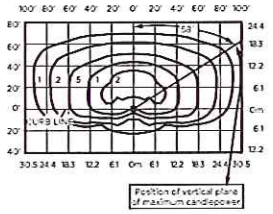
PATENTS

- Visit website for patents that cover these products: Patents http://www.cree.com/patents

Photometry

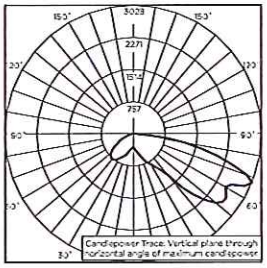
All published luminaire photometric testing performed to IESNA LM-79-08 standards by Independent Testing Laboratories, a NVLAP certified laboratory.

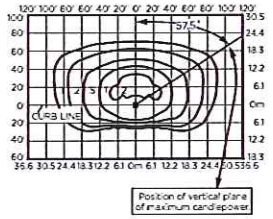




ITL Test Report #: 68359
STR-LWY-3MB-**-04-D-UL-700
Initial Delivered Lumens: 5,084

ARE-EDG-3MB-**-12-D-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 10,227
Initial FC at grade





ITL Test Report #: 68859
STR-LWY-3MP-**-04-D-UL-700-43K
Initial Delivered Lumens: 5,440

ARE-EDG-3MP-**-12-D-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 12,121
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type III Medium Distribution w/ BLS

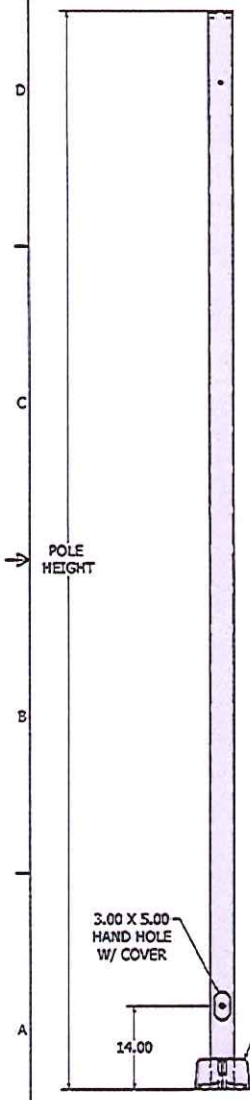
LED Count (x10)	5700K				4000K				System Watts 120-480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15°C (59°F)**
	Initial Delivered Lumens w/ BLS	BUG Ratings* Per TM-15-11	Initial Delivered Lumens w/ Partial BLS	BUG Ratings* Per TM-15-11	Initial Delivered Lumens w/ BLS	BUG Ratings* Per TM-15-11	Initial Delivered Lumens w/ Partial BLS	BUG Ratings* Per TM-15-11		120V	208V	240V	277V	347V	480V	
350mA @ 25°C (77°F)																
02	1,342	B0 U0 G1	1,590	B0 U0 G1	1,237	B0 U0 G1	1,466	B0 U0 G1	26	0.20	0.13	0.11	0.10	0.09	0.07	
04	2,683	B1 U0 G1	3,180	B1 U0 G1	2,473	B0 U0 G1	2,931	B1 U0 G1	47	0.40	0.24	0.21	0.19	0.15	0.12	
06	3,973	B1 U0 G1	4,709	B1 U0 G2	3,662	B1 U0 G1	4,340	B1 U0 G1	68	0.58	0.34	0.30	0.26	0.20	0.16	
08	5,298	B1 U0 G2	6,279	B1 U0 G2	4,882	B1 U0 G2	5,787	B1 U0 G2	90	0.77	0.44	0.38	0.34	0.26	0.20	
10	6,605	B1 U0 G2	7,828	B2 U0 G2	6,088	B1 U0 G2	7,215	B1 U0 G2	111	0.95	0.55	0.47	0.42	0.32	0.24	93%
12	7,926	B1 U0 G2	9,394	B2 U0 G2	7,305	B1 U0 G2	8,658	B2 U0 G2	132	1.15	0.66	0.56	0.50	0.38	0.28	
14	9,205	B1 U0 G2	10,910	B2 U0 G3	8,484	B1 U0 G2	10,055	B2 U0 G3	157	1.34	0.78	0.67	0.61	0.47	0.35	
16	10,520	B1 U0 G3	12,469	B2 U0 G3	9,696	B1 U0 G2	11,492	B2 U0 G3	179	1.54	0.89	0.76	0.68	0.53	0.39	
20	13,151	B2 U0 G3	15,586	B3 U0 G3	12,120	B1 U0 G3	14,365	B2 U0 G3	221	1.92	1.10	0.95	0.84	0.65	0.48	
24	15,781	B2 U0 G3	18,703	B3 U0 G3	14,544	B2 U0 G3	17,237	B3 U0 G3	264	2.30	1.31	1.12	1.00	0.77	0.56	
525mA @ 25°C (77°F)																
02	1,878	B0 U0 G1	2,226	B1 U0 G1	1,731	B0 U0 G1	2,052	B1 U0 G1	37	0.31	0.19	0.17	0.16	0.12	0.10	
04	3,757	B1 U 0 G1	4,452	B1 U0 G2	3,462	B1 U0 G1	4,104	B1 U0 G1	70	0.57	0.33	0.29	0.26	0.21	0.16	
06	5,562	B1 U0 G2	6,592	B1 U0 G2	5,127	B1 U0 G2	6,076	B1 U0 G2	102	0.87	0.50	0.44	0.39	0.30	0.22	
08	7,417	B1 U0 G2	8,790	B2 U0 G2	6,835	B1 U0 G2	8,101	B2 U0 G2	133	1.14	0.65	0.56	0.49	0.39	0.29	92%
10	9,247	B1 U0 G2	10,960	B2 U0 G3	8,523	B1 U0 G2	10,101	B2 U0 G3	172	1.47	0.85	0.75	0.67	0.51	0.38	
12	11,097	B1 U0 G3	13,152	B2 U0 G3	10,227	B1 U0 G3	12,121	B2 U0 G3	204	1.76	1.01	0.88	0.78	0.60	0.44	
14	12,888	B2 U0 G3	15,274	B3 U0 G3	11,878	B1 U0 G3	14,077	B2 U0 G3	233	2.01	1.14	0.99	0.87	0.69	0.51	
16	14,729	B2 U0 G3	17,456	B3 U0 G3	13,575	B2 U0 G3	16,088	B3 U0 G3	265	2.29	1.29	1.11	0.98	0.78	0.57	
700mA @ 25°C (77°F)																
02	2,281	B0 U0 G1	2,719	B1 U0 G1	2,102	B0 U0 G1	2,506	B1 U0 G1	50	0.42	0.25	0.22	0.20	0.15	0.12	90%
04	4,562	B1 U0 G2	5,438	B1 U0 G2	4,204	B1 U0 G1	5,012	B1 U0 G2	93	0.79	0.45	0.40	0.35	0.27	0.20	
06	6,754	B1 U0 G2	8,052	B2 U0 G2	6,225	B1 U0 G2	7,421	B2 U0 G2	137	1.18	0.67	0.59	0.51	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf
** Projected L_{70} (10K) Hours: >60,000. For recommended lumen maintenance factor data see TD-13

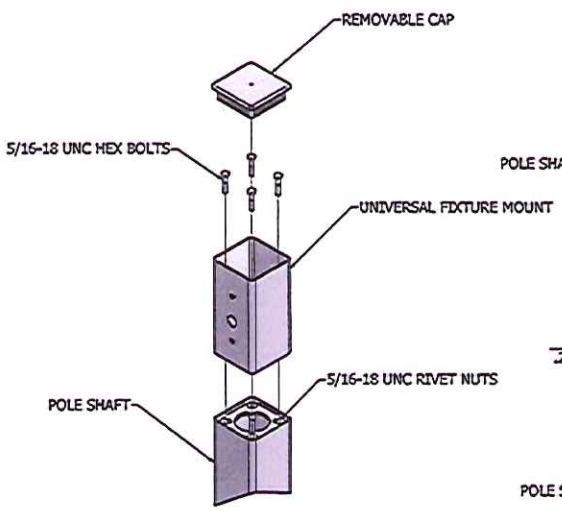
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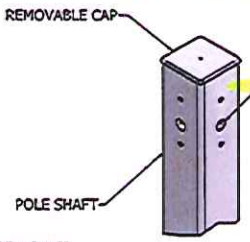
JOB NAME: CHINESE CHURCH
TYPE: 3MB-D POLE
CAT.# CPS-1-4011-22-D1-SL



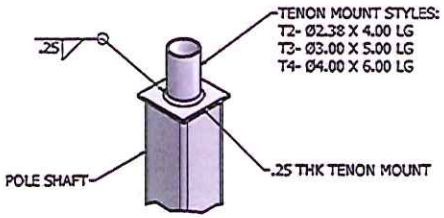
POLE DETAIL



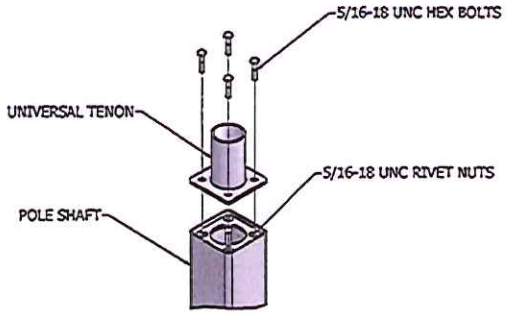
UNIVERSAL DRILL MOUNT



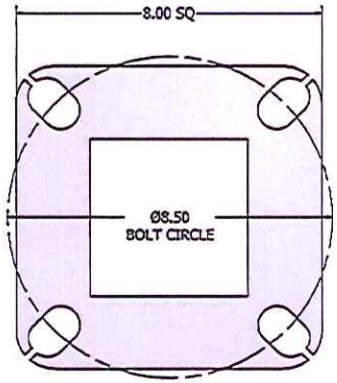
DRILLED MOUNT STYLES



TENON MOUNT STYLES



UNIVERSAL TENON MOUNT



8.00 X 8.00 X .75 BASE PLATE

NO.	POLE SHAFT SPECIFICATIONS
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.
2.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL (ASTM A-36) PLATE WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.
3.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVINIZED. FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.
4.	POLES ARE STANDARD POLYESTER POWDER COAT FINISH.

POLE DIMENSIONS				
POLE HGT (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
25'	4.00	4.00	11 GA.	25'

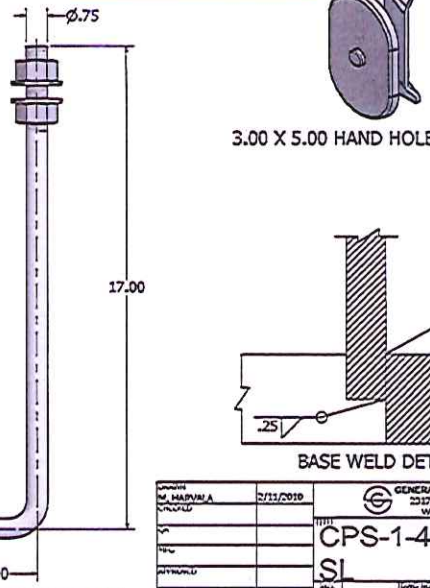
BASE PLATE DIMENSIONS			
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)
8.50	8.00 SQ	1.00	.75

ANCHOR BOLT DIMENSIONS	
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)
.75	20.00

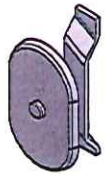
ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	4.1	3.3	2.6	1.8

*WITH 1.3 GUST FACTOR

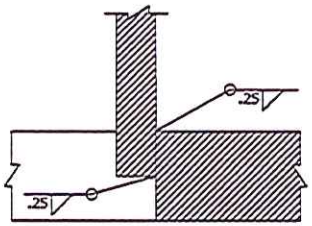
POLE CUT TO 22' BY FACTORY



Ø.75 X 20.00 ANCHOR BOLT



3.00 X 5.00 HAND HOLE COVER



BASE WELD DETAIL

NOTE: 4.00 SQ & 5.00 SQ. POLES IN STANDARD LENGTHS WITH STANDARD DARK BRONZE FINISH ARE SUPPLIED WITH THE PATENTED UNIVERSAL DRILL OR TENON MOUNT SYSTEM.

DRAWN: M. MAPURA	2/11/2010	GENERAL STRUCTURES, INC. 23123 CROZIERCK HWY. WARREN, MT 48089
CHECKED:		TITLE: CPS-1-4011-22-D1-SL
SIZE: D		DWG NO: CPS-1-4011-25
SCALE: NONE		SHEET 1 OF 1

THE EDGE® ARE-EDG-5M-DA

Area Luminaire – Type V Medium – Direct Arm Mount

JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH
JOB NAME: CHINESE CHURCH

TYPE: 5M-D2 HEAD

Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heat sinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3-6" (76-152mm) square or round pole. Luminaire is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers.



Performance Summary

Utilizes BetaLED® Technology

Patented NanoOptic® Product Technology

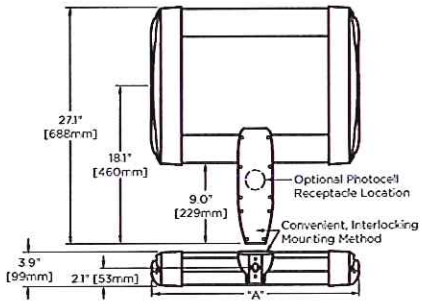
Made in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

CCT: 5700K (+/- 500K) Standard, 4000K (+/- 300K)

Warranty: 5 years on luminaire / 10 years on Colorfast DeltaGuard® finish

EPA and Weight: Reference EPA and Weight spec sheet



LED Count (x10)	Dim. "A"
02	12.1" [306mm]
04	12.1" [306mm]
06	14.1" [357mm]
08	16.1" [408mm]
10	18.1" [459mm]
12	20.1" [510mm]
14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes

DBL SET-UP = (2)

Ordering Information

Example: ARE-EDG-5M-DA-02-D-UL-SV-350-OPTIONS

ARE-EDG	5M	DA	04	D	UL	SV	350	40K
Product	Optic	Mounting	LED Count (x10)	Version	Voltage	Color Options	Drive Current	Options
ARE-EDG	5M Type V Medium	DA Direct Arm	02 04 06 08 10 12 14 16 20 24	D	UL Universal 120-277V UH Universal 347-480V 34 347V	SV Silver (Standard) BK Black BZ Bronze PB Platinum Bronze WH White	350 350mA 525* 525mA 700** 700mA	40K 4000K Color Temperature - Color temperature per luminaire DIM 0-10V Dimming - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current F Fuse - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options HL Hi / Low (175/350/525 Dual Circuit Input) - Refer to ML spec sheet for details - Sensor not included P Photocell - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specifiy voltage other than UH R NEMA Photocell Receptacle - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Intended for horizontal mounting - Photocell by others ML Multi-Level - Refer to ML spec sheet for details

* Available on luminaires with 20-160 LEDs
** Available on luminaires with 20-60 LEDs

BetaLED TECHNOLOGY

Rev. Date: 6/26/2012

CREE®

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Area Luminaire – Type V Medium – Direct Arm Mount

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weather-tight LED driver compartments and high performance heat sinks
- Convenient interlocking mouting method. Mounting housing is rugged die cast aluminum mounting to 3-6" (76-152mm) square or round pole, secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weather-tight electrical box with terminal strips (12Ga-20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

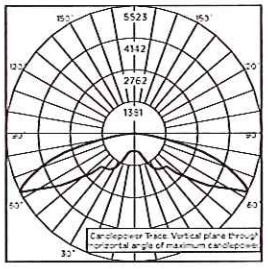
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium ("DLC") Qualified Products List ("QPL") when ordered without the backlight control shield
- Dark Sky Friendly, IDA Approved
- RoHS Compliant
- Meets Buy American requirements within ARRA

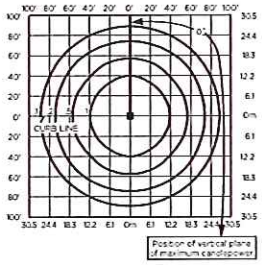
PATENTS

- Visit website for patents that cover these products: Patents http://www.cree.com/patents

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by Independent Testing Laboratories, a NVLAP certified laboratory.





ITL Test Report #: 68282
ARE-EDG-5M-**-12-D-UL-525-43K
Initial Delivered Lumens: 16,029

ARE-EDG-5M-**-12-D-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 15,341
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type V Medium Distribution

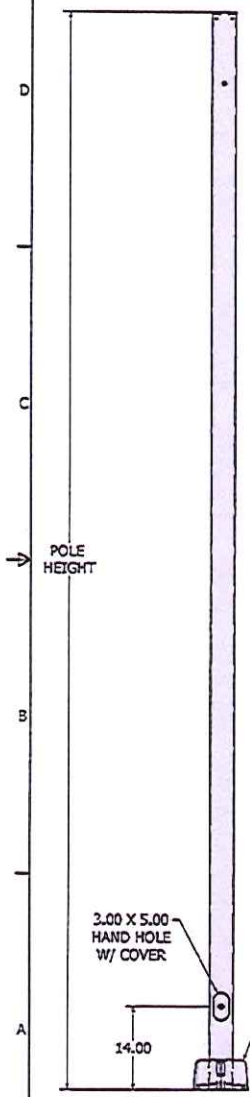
LED Count (x10)	5700K Initial Delivered Lumens	5700K BUG Ratings* Per TM-15-11	4000K Initial Delivered Lumens	4000K BUG Ratings* Per TM-15-11	System Watts 120-480V	TOTAL CURRENT 120V	208V	240V	277V	347V	480V	50K Hours Projected Lumen Maintenance Factor @ 15°C (59°F)**
350mA @ 25°C (77°F)												
02	2,013	B2 U0 G1	1,855	B1 U0 G1	26	0.20	0.13	0.11	0.10	0.09	0.07	93%
04	4,025	B2 U0 G1	3,710	B2 U0 G1	47	0.40	0.24	0.21	0.19	0.15	0.12	
06	5,960	B3 U0 G1	5,493	B3 U0 G1	68	0.58	0.34	0.30	0.26	0.20	0.16	
08	7,946	B3 U0 G1	7,324	B3 U0 G1	90	0.77	0.44	0.38	0.34	0.26	0.20	
10	9,908	B3 U0 G2	9,131	B3 U0 G2	111	0.95	0.55	0.47	0.42	0.32	0.24	
12	11,889	B4 U0 G2	10,958	B3 U0 G2	132	1.15	0.66	0.56	0.50	0.38	0.28	
14	13,808	B4 U0 G2	12,726	B4 U0 G2	157	1.34	0.78	0.67	0.61	0.47	0.35	
16	15,781	B4 U0 G2	14,544	B4 U0 G2	179	1.54	0.89	0.76	0.68	0.53	0.39	
20	19,726	B4 U0 G3	18,180	B4 U0 G3	221	1.92	1.10	0.95	0.84	0.65	0.48	
24	23,671	B5 U0 G3	21,816	B5 U0 G3	264	2.30	1.31	1.12	1.00	0.77	0.56	
525mA @ 25°C (77°F)												
02	2,818	B2 U0 G1	2,597	B2 U0 G1	37	0.31	0.19	0.17	0.16	0.12	0.10	92%
04	5,635	B3 U0 G1	5,194	B3 U0 G1	70	0.57	0.33	0.29	0.26	0.21	0.16	
06	8,344	B3 U0 G2	7,690	B3 U0 G1	102	0.87	0.50	0.44	0.39	0.30	0.22	
08	11,125	B3 U0 G2	10,253	B3 U0 G2	133	1.14	0.65	0.56	0.49	0.39	0.29	
10	13,871	B4 U0 G2	12,784	B4 U0 G2	172	1.47	0.85	0.75	0.67	0.51	0.38	
12	16,645	B4 U0 G2	15,341	B4 U0 G2	204	1.76	1.01	0.88	0.78	0.60	0.44	
14	19,331	B4 U0 G2	17,817	B4 U0 G2	233	2.01	1.14	0.99	0.87	0.69	0.51	
16	22,092	B4 U0 G2	20,362	B4 U0 G2	265	2.29	1.29	1.11	0.98	0.78	0.57	
700mA @ 25°C (77°F)												
02	3,441	B2 U0 G1	3,172	B2 U0 G1	50	0.42	0.25	0.22	0.20	0.15	0.12	90%
04	6,883	B3 U0 G1	6,344	B3 U0 G1	93	0.79	0.45	0.40	0.35	0.27	0.20	
06	10,191	B3 U0 G2	9,393	B3 U0 G2	137	1.18	0.67	0.59	0.51	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf
** Projected L_{70} (10K) Hours: >60,000. For recommended lumen maintenance factor data see TD-13

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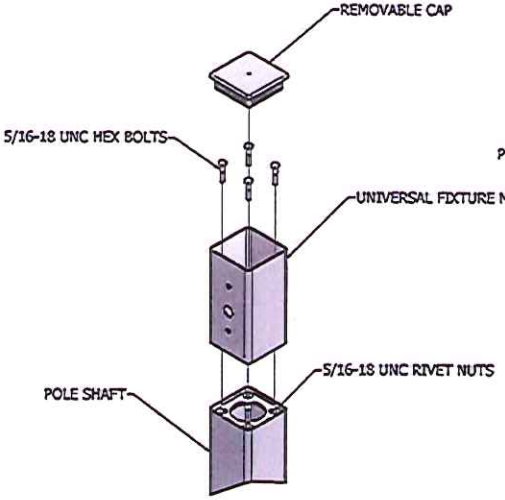
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JOB NAME: CHINESE CHURCH
TYPE: 5M-D2 POLE
CAT.# CPS-1-4011-22-D2(180)-SL

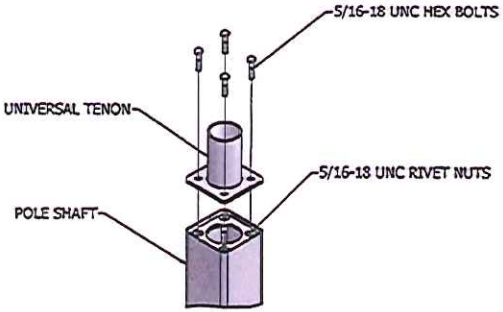


POLE DETAIL

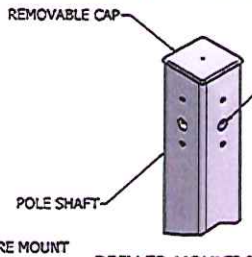
NOTE: 4.00 SQ & 5.00 SQ. POLES IN STANDARD LENGTHS WITH STANDARD DARK BRONZE FINISH ARE SUPPLIED WITH THE PATENTED UNIVERSAL DRILL OR TENON MOUNT SYSTEM.



UNIVERSAL DRILL MOUNT

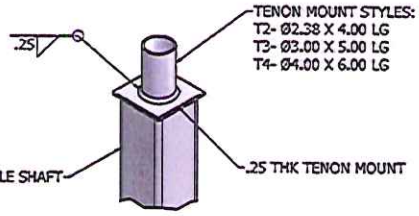


UNIVERSAL TENON MOUNT



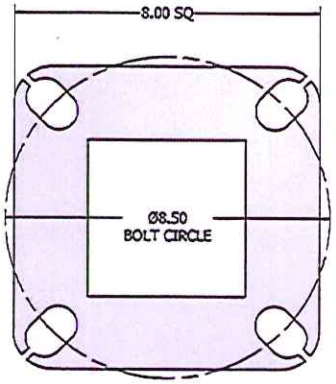
DRILLED MOUNT STYLES

DRILLED PER FIXTURE REQUIREMENTS:
D1- DRILLED FOR 1 FIXTURE
D2- DRILLED FOR 2 FIXTURES AT 90° OR 180°
D3- DRILLED FOR 3 FIXTURES
D4- DRILLED FOR 4 FIXTURES



TENON MOUNT STYLES

TENON MOUNT STYLES:
T2- Ø2.38 X 4.00 LG
T3- Ø3.00 X 5.00 LG
T4- Ø4.00 X 6.00 LG



8.00 X 8.00 X .75 BASE PLATE

NO.	POLE SHAFT SPECIFICATIONS
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.
2.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL (ASTM A-36) PLATE WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.
3.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVINIZED. FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.
4.	POLES ARE STANDARD POLYESTER POWDER COAT FINISH.

POLE DIMENSIONS			
POLE HGT (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
25'	4.00	4.00	11 GA.	2.5'

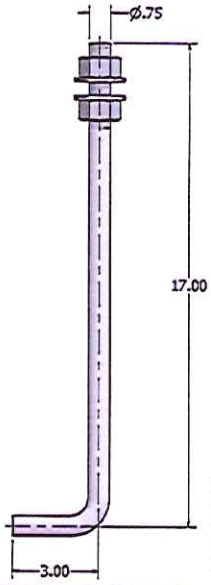
BASE PLATE DIMENSIONS			
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)
8.50	8.00 SQ	1.00	.75

ANCHOR BOLT DIMENSIONS	
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)
.75	20.00

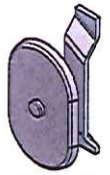
ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	4.1	3.3	2.6	1.8

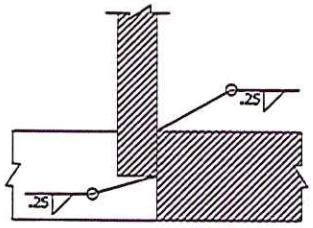
*WITH 1.3 GUST FACTOR

POLE CUT TO 22' BY FACTORY



Ø.75 X 20.00 ANCHOR BOLT


3.00 X 5.00 HAND HOLE COVER



BASE WELD DETAIL

M. HARVALA	2/11/2010	GENERAL STRUCTURES, INC. 2121 GROESBECK HWY. WARREN, MI 48089
		CPS-1-4011-22-D2-SL
		D — CPS-1-4011-25

Attachment H

DARK SKIES AND GLARE

(PHOTOMETRIC STUDY)

Chinese Bible Church of San Diego

16919 Four Gee Road

San Diego, California

County of San Diego Case Numbers: PDS2010-3600-10-004(REZ), PDS2014-SPA-14-001,

PDS2010-330010-037(MUP), LOG NO. PDS2014-3910-9508007L(ER)

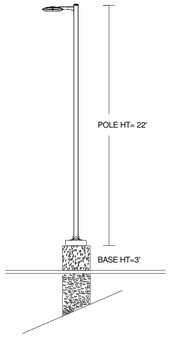
APN 678-060-27-00, KIVA Project: 09-0117132

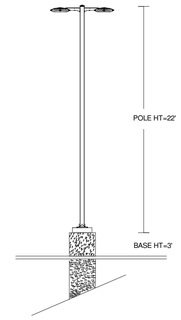
Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Lumens/Lamp	LLF	Total Watts	Description	Lum. Watts
	1	4M-D	SINGLE	3526	0.930	47	ARE-EDG-4M-DA-04-D-UL-SV-350-40K 40 LED 350mA	47
	6	3M-D	SINGLE	3343	0.930	282	ARE-EDG-3M-DA-04-D-UL-SV-350-40K 40 LED 350mA	47
	1	3M-D2	BACK-BACK	3343	0.930	94	ARE-EDG-3M-DA-04-D-UL-SV-350-40K 40 LED 350mA	47
	10	3MB-D	SINGLE	2473	0.930	470	ARE-EDG-3MB-DA-04-D-UL-SV-350-40K 40 LED 350mA	47
	11	5M-D2	BACK-BACK	3710	0.930	1034	ARE-EDG-5M-DA-04-D-UL-SV-350-40K 40 LED 350mA	47

Footcandles calculated using predicted lumen values after 50K hours of operation					
Label	Avg	Max	Min	Avg/Min	Max/Min
5' PAST PROPERTY LINE	0.07	0.1	0.0	N.A.	N.A.
CalcPts	0.53	1.2	0.2	2.65	6.00
PROPERTY LINE	0.11	0.2	0.0	N.A.	N.A.

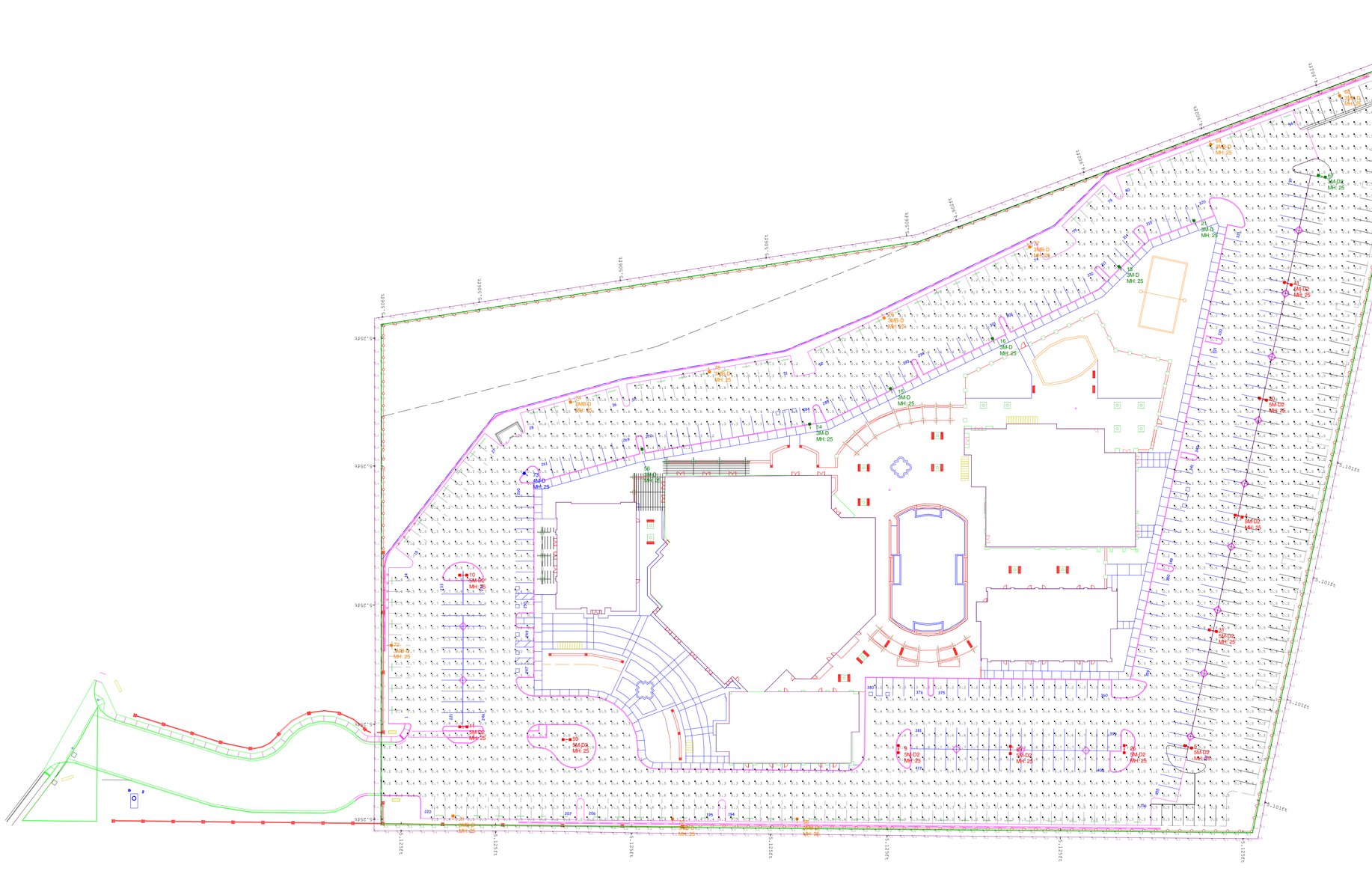
Pole Schedule
(17) PS4S22C1SV (25' X 4" STEEL SQUARE POLE)
(12) PS4S22C2SV (25' X 4" STEEL SQUARE POLE 2@180)

Proposed poles meet 120 MPH sustained winds.





Luminaire Location Summary		
LumNo	Z	Tilt
4	25	0
5	25	0
9	25	0
10	25	0
11	25	0
14	25	0
15	25	0
16	25	0
18	25	0
20	25	0
21	25	0
26	25	0
31	25	0
41	25	0
56	25	0
58	25	0
59	25	0
66	25	0
67	25	0
68	25	0
69	25	0
70	25	0
71	25	0
72	25	0
73	25	0
74	25	0
75	25	0
76	25	0
77	25	0



1200 92nd Street - Sturtevant, WI 53177
www.cree.com - (800) 236-6800

Project Name: CHINESE CHURCH | Customer No: 08348
Date:5/30/2013 | Scale: 1"=50' | Footcandles calculated at grade
Filename: V:\Common\AppEng\OUT\130221CR1LJSR4.AGI | Layout by: LINDA SCHALLER

Illumination results shown on this lighting design are based on project parameters provided to Cree, Inc. used in conjunction with luminaire test procedures conducted under laboratory conditions. Actual project conditions differing from these design parameters may affect field results. The customer is responsible for verifying dimensional accuracy along with compliance with any applicable electrical, lighting, or energy code.