BOARD OF ZONING APPEALS
STAFF REPORT

To:	Members of the Board of Zoning Appeals
From:	Tom Vander Woude, Planning Director
Meeting Date:	January 11, 2022
Agenda Item:	BZA Docket No. 21-011
Hearing:	**PUBLIC HEARING**
Summary:	Kimley-Horn & Associates on behalf of Target Corporation requesting approval of multiple variances from *Section 26-6.405.Q Private Lighting Standards* to install nonconforming parking lot lights at 8005 Calumet Avenue.

Applicant:	Connor Strege of Kimley-Horn & Associates on behalf of Target Corporation
Property Address:	8005 Calumet Avenue
Current Zoning:	CD-4.A General Urban A Character District
Adjacent Zoning:	North: CD-4.A South: CD-3.R2 East: CD-4.A West: CD-4.A
Action Requested:	Approve Variances
Additional Actions Required:	Findings of Fact
Staff Recommendation:	**<u>Approve variances</u>**
Attachments:	BZA 21-011 variance application Target Drive Up Expansion Overall Site Plan, Improvement Plan, Details prepared by Kimley-Horn dated 08.27.2021 Target Site Lighting Plan prepared by Kimley-Horn dated 01.05.2022 McGraw-Edison GLEON Galleon Area / Site Luminaire spec sheet

BACKGROUND

Kimley-Horn & Associates has submitted plans on behalf of Target Corporation to install four additional light fixtures on two existing poles within the parking lot of the Target Store at 8005 Calumet Avenue. Two new fixtures will be installed on each pole, for a total of four fixtures per pole. The purpose of the new lights is to increase illumination of the newly designated "Drive Up" area of the parking lot. This area consists of one double-loaded bay of parking that will be restriped to provide a walkway between the parking spaces and identified with permitted informational signs. The area will be used by customers for picking up online orders, which will be delivered by Target staff directly to vehicles.

The proposed light fixtures are identical to the existing lights in the Target store parking lot, which were installed in the early 2000s when the store was constructed. The proposed lights do not conform to the height, color temperature, and head/luminaire standards adopted by the Town in the 2019 zoning ordinance. Additionally, the proposed lighting exceeds the overall illumination maximum for the site. The attached photometric plan was updated January 5, 2022, to confirm the average light level for the entire site.

Figure 1: Existing Target Light Pole

In 2019, the Town approved plans for the interior and exterior remodeling of the subject property. That project commenced this year and is nearly complete. The remodel included upgrades to the façade, new signage, new and enhanced landscaping, and substantial changes to the interior of the building. In connection with that remodel, the site was granted variances for signage and landscaping under dockets BZA 19-004 and BZA 19-006, respectively. In both cases, the BZA approved the variances after giving consideration to the fact that this Target store was originally constructed under a different set of zoning standards which made it difficult to comply with current standards while making the desired improvements.

DISCUSSION

The variances being requested in connection with this project are as follows.

Code Section	Standard	Permitted	Proposed
Section 26-6.405.Q.2.b	Lighting Standards or Poles - Height	Maximum Height 20 feet	39 feet
Section 26-6.405.Q.3.a	Illumination – Average, minimum, maximum	Illumination of Parking Areas, Parking Lots, Parking Structures, and all pedestrian ways shall be provided at an average of 1.0-2.5 footcandles and a minimum of 0.4 foot-candles	3.96 footcandles
Section 26-6.405.Q.3.c	Illumination – Color Temperature	Maximum 3000K	4000K
Table 26-6.26-6.405.Q-1	Private Lighting Types – Head/Luminaire Types	Colonial head, coach head, acorn head	Shoebox – see attached spec sheet

At the preliminary hearing held on December 14, 2021, members of the Board of Zoning Appeals asked whether the existing lighting is the same lighting that was onsite 20 years ago when the subject property was a Montgomery Wards store. Staff has reviewed aerial photos and a plat of survey from the 1990s and determined that the site lighting was completely reconfigured when Target redeveloped the subject property – the number and location of light poles are clearly different. Additionally, the photometric plan and fixture spec sheet indicate that the site lighting is modern LED lighting.

As noted above, at the time of the preliminary hearing, it was unknown whether the overall site lighting exceeded the maximum illumination permitted by the zoning ordinance. A revised photometric plan dated 1/5/2022 was submitted and confirms that the site exceeds the maximum and will require a fourth variance.

VARIANCE STANDARDS

The variance process is established to provide relief to a property owner when, due to unique circumstances, compliance with the zoning code imposes a hardship or practical difficulty on a property owner. The BZA is under no obligation to grant a variance. It is the petitioner's responsibility to prove a hardship or practical difficulty. The BZA should ask the petition to address the criteria listed below.

Sec. 26-6.804.I of the Munster Zoning Code states that the basis for a variance is as follows:

g. General Standards.
A Variance may be granted only if the Decision-Making Authority has made the following determinations for such Variance:

i. the practical difficulties or unnecessary hardships that would be incurred by strict application of the Use or Development standard, as applicable, are unique and not shared by all properties in the vicinity and are not self-imposed;
ii. such Variance is the minimum Variance that will relieve such practical difficulties or unnecessary hardships, as applicable;
iii. such Variance is in the spirit of the general purposes and intent of this Article as stated in Division 1; and
iv. such Variance is so designed as to provide reasonable consideration to, among other things, the character of the neighborhood, District, or Civic Zone, the conservation of property values in the vicinity, and the guidance of Development in accordance with the Comprehensive Plan.

h. Specific to Development standards Variances:
A Variance from Development Standards may be approved or approved with conditions only if:

i. it will not be injurious to the public health, safety, morals, and general welfare of the community;
ii. the use and value of the area Adjacent to the property included in the Variance will not be affected in a substantially adverse manner; and
iii. the strict application of the Development standards will result in practical difficulties in the use of the property.

The applicant has addressed these criteria in the attached application.

RECOMMENDATION

The Board of Zoning Appeals may wish to consider the following motion:

Motion to approve multiple variances from Section 26-6.405.Q Private Lighting Standards *to install the nonconforming parking lot lights at 8005 Calumet Avenue in accordance with the plans and specifications submitted under BZA Docket No. 21-011.*

Petition BZA _____-_____
Date: _____
Application Fee: $_____
Sign Fee: $_____

Town of Munster Board of Zoning Appeals Petition Application

OWNER INFORMATION:

Matthew Flansburg - Target Corporation
Name of Owner

(612) 761-6788
Phone Number

50 S. 10th St. Ste #400, TP3 1174, Minneapolis, MN 55403
Street address, City, ST, ZIP Code

matthew.flansburg@target.com
Email address

APPLICANT OR PETITIONER INFORMATION (if different than above):

Connor Strege - Kimley-Horn & Associates, Inc.
Name of Applicant/Petitioner

(317) 218-9465
Phone Number

250 East 96th Street, Suite 580, Indianapolis, IN 46220
Street address, City, ST, ZIP Code

connor.strege@kimley-horn.com
Email address

PROPERTY INFORMATION:

Target Corporation
Business or Development Name (if applicable)

8005 Calumet Avenue
Address of Property or Legal Description

CD-4.A
Current Zoning

APPLICATION INFORMATION:

Please select what this Application is for:

☒ **Variance** If yes, select one of the following: ☐ **Use** ☒ **Developmental Standards**

☐ **Conditional Use**

☐ **Administrative Appeal**

Brief Description of Project and List of Variances or Conditional Uses Being Requested (if applicable):

The project shall consist of expansion of existing Drive Up stalls to provide contactless pick up services for customers. The Drive Up stalls shall increase in number from 8 to 24 stalls total. Additional lighting is proposed to serve the pedestrian/employee travel path associated with the Drive Up service for additional security. 4 total additional lighting fixtures are proposed to be added to 2 existing light poles on site. The proposed lighting shall be consistent with existing infrastructure. The list of variances associated with the lighting additions are as follows:

1. Permit lighting fixtures of 4000K color temperature to match existing conditions. City Zoning Ordinance §Q.3.c limits color temperature to 3000K.
2. Permit existing poles of 39 feet to be utilized. City Zoning Ordinance §Q.2.b limits lighting to twenty feet (20').
3. Permit lighting fixtures matching existing to be installed. City Zoning Ordinance Table 26-6.26-6.405.Q-1 requires Colonial, Coach, or Acorn Heads.

Tracy Letzring
Name of Registered Engineer, Architect or Land Surveyor

(970)-387-8908
Phone Number

Suite 210, 3801 Automation Way, Fort Collins, CO 80525
Street address, City, ST, ZIP Code

tracy.letzring@kimley-horn.com
Email address

REQUIRED ATTACHMENTS

Required Attachments for Board of Zoning Appeals Applications

To ensure that adequate information is provided to the BZA, please check off each of these items and provide documentation to the Community Development Department at the time of submittal of the application.

ALL APPLICATIONS	Included	N/A
Narrative statement describing project	X	
Property owner consent (Signature page)	X	
Proof of Ownership (e.g. copy of tax bill)	X	
Plat of Survey depicting current conditions	X	
Site Plan containing the following:	X	
Boundary identification		
Fire hydrant locations		
Accessory structures		
Parking lot design		
Utility location		
Building footprints		
Proposed curb cuts		
Drainage/detention plans		
Traffic circulation		
Ingress/egress locations		
Major topographic information		
Infrastructure improvements		
Conditions of Approval Form (Note: complete the form specific to your petition)*	X	
Any other information that the BZA may find useful in determining whether the application is merited.		

* Unique conditions have been established for special use permits for public garages, gas filling stations, used car lots, garden centers, massage parlors, adult bookstores, tattoo parlors, adult cabarets, and outdoor dining areas. Community Development staff will advise potential applicants of these at the pre-application meeting.

NOTE: If you checked any exhibits "N/A", please explain:

_____

_____

_____

_____

_____

_____

_____

DEVELOPMENTAL VARIANCE CONDITIONS OF APPROVAL

The Munster Board of Zoning Appeals is authorized to hear petitions for developmental standards variances and to approve or deny. The Board of Zoning Appeals may also impose reasonable conditions and restrictions. Indiana Code 36-7-4-918.5 lists the legal criteria for a developmental standards variance:

1. The approval will not be injurious to the public health, safety, morals, and general welfare of the community. Explain why this statement is true in this case:

The approval of the requested variance will provide consistency with existing site conditions, which are understood to be supportive of the community's health and safety.

2. The use and value of the area adjacent to the property included in the variance will not be affected in a substantially adverse manner. Explain why this statement is true in this case:

The resulting footcandles for the fixtures described in this Variance application do not extend beyond the subject property's limits.

3. The strict application of the terms of the zoning ordinance will result in practical difficulties in the use of the property. Explain why this statement is true in this case:

The strict application of the zoning ordinance would create distinct discrepancy between the existing lighting infrastructure and the proposed additions in regards to the pole height, color temperature, and fixture type.

Attach additional pages if necessary

TARGET®

DRIVE UP EXPANSION
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

SCOPE OF WORK

PARKING LOT RE-STRIPING, STALL PARKING SIGNAGE AND WAYFINDING DRIVE UP BEACONS WHERE SHOWN ON THE PLAN.

ZONING

CD-4.A

OFF-STREET PARKING LOT CODE REQUIREMENTS

- DRIVE AISLE = 21' MIN. WIDTH
- STANDARD PARKING STALL = 9' X 18' MIN.

OWNER

TARGET CORP.
CONTACT: MATTHEW FLANSBURG
50 SOUTH 10TH ST, SUITE 400
MINNEAPOLIS, MN, 5543
MATTHEW.FLANSBURG@TARGET.COM

CIVIL ENGINEER

KIMLEY-HORN
CONTACT: JUSTIN BECKER P.E.
401 B ST, SUITE 600
SAN DIEGO, CA, 92101
619-744-0619
JUSTIN.BECKER@KIMLEY-HORN.COM

VICINITY MAP
NTS

SHEET INDEX

COVER SHEET.....C0.0
OVERALL SITE PLAN.....C0.1
IMPROVEMENT PLAN.....C1.0
DETAILS.....C2.0 - C2.1

TARGET®
1000 NICOLLET MALL
MINNEAPOLIS, MN 55403

Kimley»Horn

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250 EAST 96TH STREET, #580
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

Date	No	Description

DATE: 8/27/2021

TARGET
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

Project Number	T-1913
Config:	
Drawn By	EG
Checked By	KR

COVER SHEET

C0.0

Plotted By:Schlueter, Noble Sheet Set:Kris Layout:C0.0 August 27, 2021 10:39:19am G:\Users\Noble.Schlueter\OneDrive - Kim\Documents_T-Stores\T913 Munster IN\CADD\T1913 DriveUp Expansion.dwg
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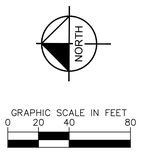
OVERALL SITE PLAN
1" = 40'



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OVERALL SITE PLAN

C0.1

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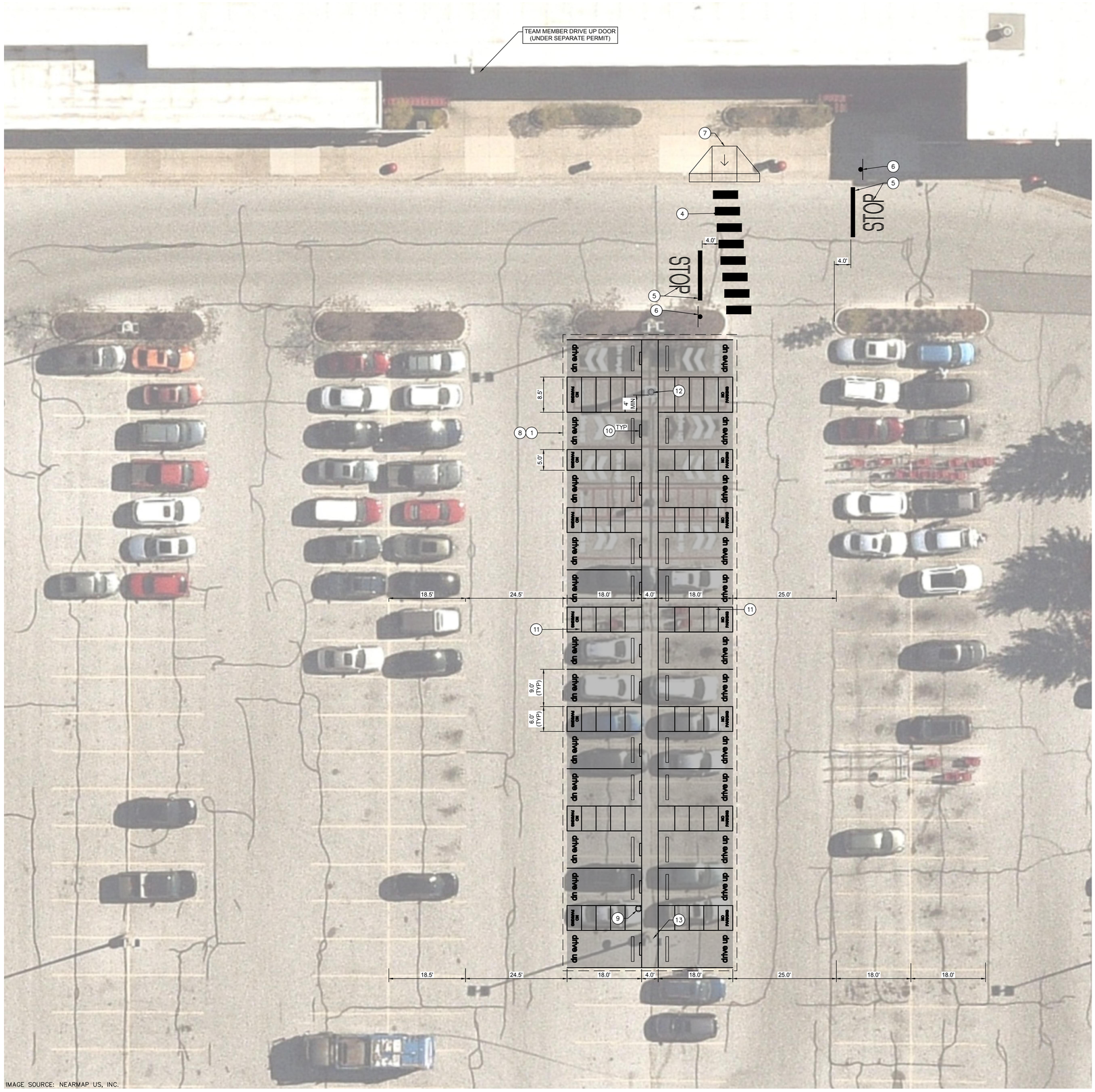
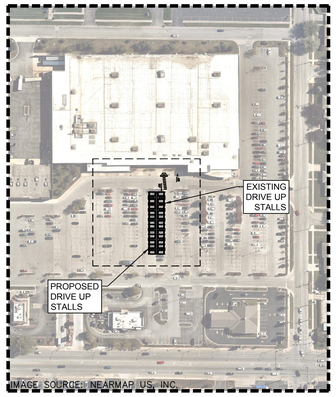


DRIVE UP STALLS
1" = 10'



KEY MAP
1" = 150'

CONSTRUCTION NOTES

1. SANDBLAST AND REMOVE EXISTING STRIPING AND DRIVE UP SIGNAGE.
4. INSTALL CROSSWALK PER DETAILS SHEET.
5. INSTALL STOP BAR AND MARKING PER DETAILS SHEET.
6. INSTALL STOP SIGN PER DETAILS SHEET.
7. INSTALL CURB RAMP PER DETAILS SHEET.
8. INSTALL DRIVE UP STRIPING AND SIGNAGE PER DETAILS SHEET.
9. INSTALL DRIVE UP BEACON PER DETAILS SHEET.
10. INSTALL STANCHION SIGN AND BASE PER DETAILS SHEET.
11. REMOVE AND SALVAGE EXISTING CART CORRALS. CONTRACTOR TO COORDINATE RELOCATION WITH TARGET.
12. PROTECT IN PLACE EXISTING DRIVE UP BEACON.
13. PROTECT IN PLACE EXISTING LIGHT POLE.

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20

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MINNEAPOLIS, MN 55403

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Project Number	T-1913
Config:	
Drawn By	EG
Checked By	KR

IMPROVEMENT PLAN

C1.0

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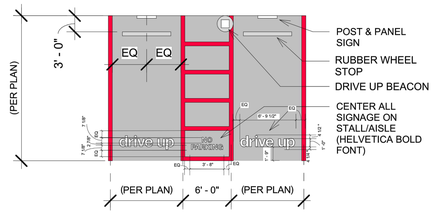


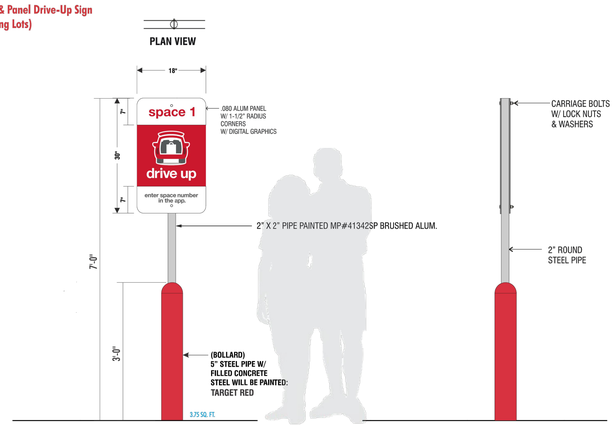
NOTES:

1. ALL RED STRIPING IS 6" WIDE
2. TARGET TO PROVIDE GC WITH "drive up" AND "NO PARKING" TEMPLATES
3. SEE PLAN VIEW DIMENSIONS FOR EXACT LAYOUT OF SITE
4. REFER TO C1.0 FOR EXACT DIMENSIONS

DRIVE UP STRIPING
N.T.S.

FEDERAL HEATH
VISUAL COMMUNICATIONS
www.FederalHeath.com

Single Pole Post & Panel Drive-Up Sign
(For Use in Parking Lots)



DU-PB1 | STANDARD D/F "DRIVE-UP" POST & PANEL W/ BOLLARD
scale 3/4"=1'-0"

SIDE VIEW
scale 3/4"=1'-0"

Red	Dark Red	OPAQUE WHITE VINYL
Hex# #CC0000	Hex# #8A181A	
CMYK 4/100/85/6	CMYK 28/100/100/31	
PMS 186	PMS 188	

Dark Gray	Light Gray
Hex# #4C4C4E	Hex# #BEBEBE
CMYK 0/0/0/85	CMYK 26/21/20/0
PMS 425	PMS 421

PRIMARY COLOR PALETTE

Use 100% or 85% black for headlines, subheads and body copy.

Use Target Red for savings messages.

Dont use colors outside of this palette.

SHEET 9 of 28

STANCHION SIGN POST AND BASE
N.T.S.

NON-STANDARD

NON-ILLUMINATED and Car Logo (minus bullseye) & 'drive up' Copy ONLY to be on Two (2) Sides

***NOTE:**
- Per the City of Munster, IN this Beacon is Required to be NON-ILLUMINATED.
- The Car Logo / 'drive up' Copy is Only Allowed on Two (2) Sides while the Other Two (2) Sides must be left 'Blank'.
- Additionally, NO BRAND IDENTIFIERS (i.e. the Target Bullseye) will be allowed.

MATERIAL FINISH COLORS

Target Red # 2129C2 AKZO (FULL GLOSS)	AKZO NOBEL WHITE (FULL GLOSS)	7328 WHITE Acrylic	CLEAR Acrylic W/ DIFFUSER
Cabinets	Header/Supports	Logo Face	Push-Thru Copy

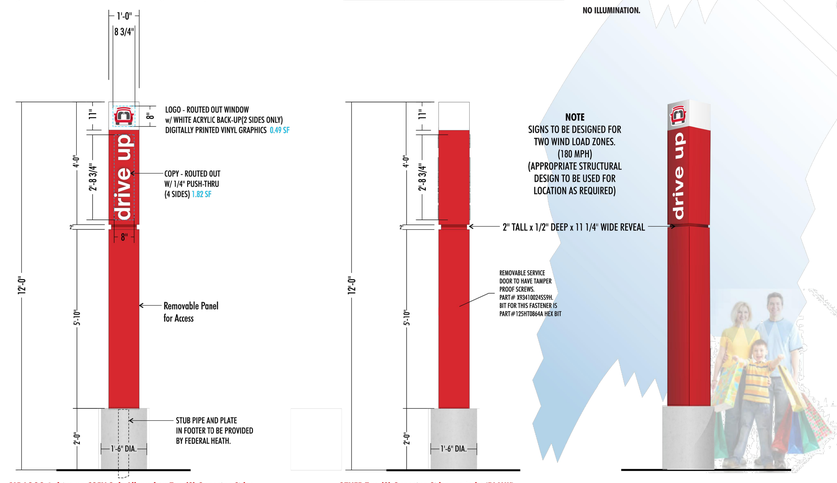
CAR LOGO COLORS

Target Red PMS 186	DARK RED PMS 188	DARK GRAY PMS 425	LIGHT GRAY PMS 421

DESCRIPTION OF WORK

MANUFACTURE AND INSTALL BEACON SIGN AS SHOWN AND NOTED .125" ALUM SKIN & FRAME.. COPY TO BE ROUT-OUT WITH 1/4" PUSH THRU. PUSH THRU IS 1/2" SHOULDER-CUT CLEAR ACRYLIC W/ FIRST SURFACE WHITE VINYL AND DIFFUSER 2ND SURFACE.
TOP (LOGO) IS 7328 WHITE ACRYLIC VINYL GRAPHICS FIRST SURFACE. SERVICE DOORS AS REQUIRED. ALL FASTENERS TO BE COUNTER-SUNK SCREWS.
FACES AND POLE COVER TO BE PAINTED RED (SEE CHART)

NO ILLUMINATION.



CAR LOGO & drive up COPY Only Allowed on Two (2) Opposing Sides
12'(FT) DRIVE-UP BEACON | FOUR (4) SIDED | NON-ILLUMINATED
scale 1/2"=1'-0"

OTHER Two (2) Opposing Sides are to be 'BLANK'
12'(FT) DRIVE-UP BEACON | FOUR (4) SIDED | NON-ILLUMINATED
scale 1/2"=1'-0"

12'(FT) DRIVE-UP BEACON (NON-ILLUMINATED)

STRUCTURAL DETAILS SHOWN HEREON WERE PROVIDED BY MBI, INC, AND CERTIFICATION OF THESE DRAWINGS MAKES NO IMPLICATION TO THEIR ACCURACY, NOR DOES IT INFER PROFESSIONAL SUPERVISION THEREOF.

SOLAR DRIVE UP BEACON
N.T.S.

FEDERAL HEATH
VISUAL COMMUNICATIONS
www.FederalHeath.com
12704 Dupont Cir.
Tampa, FL 34620
(813) 855-4415 (800) 294-3294
Fax (813) 854-3037

Manufacturing Facilities:
Oxnard, CA - Euless, TX - Jacksonville, TX
Delaware, OH - Racine, WI

Office Locations:
Oxnard, CA - Las Vegas, NV - Los Angeles, CA
Idaho Falls, ID - Lake Mary, FL - Lewisville, TX - San Antonio, TX
Houston, TX - Corpus Christi, TX - Indianapolis, IN
Louisville, KY - Knoxville, TN - Grafton, WI - Delaware, OH
Willowbrook, IL - Tunica, MS - Atlanta, GA
Tampa, FL - Daytona Beach, FL - Orlando, FL

Building Quality Signage Since 1901

Revisions:

Account Rep: BOYD HIPPENSTIEL
Project Manager: DENA LUTHER
Drawn By: J. GRAHAM / C. ADACHI
Project / Location:

target
Store # T1913
8005 CALUMET AVE
MUNSTER, IN 46321

Underwriters Laboratories Inc. — ELECTRICAL TO USE UL LISTED TRANSFORMERS & MATERIALS IN ACCORDANCE WITH NEC, NFPA 70. STANDARDS ALL ELECTRICAL SIGNS ARE TO COMPLY WITH U.L. GROUND FAULT PROTECTION, ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE. THE FEDERAL GOVERNMENT AND GUARANTEE OF ALL SIGNS.

Client Approval/Date:

Landlord Approval/Date:

This original drawing is provided as part of a planned project and is not to be exhibited, copied or reproduced without the written permission of Federal Heath Sign Company LLC or its authorized agent. ©FHSC
Colors Depicted In This Rendering May Not Match Actual Material Finishes. Refer To Product Samples For Exact Color Match.

Job Number: 23-67549-10
Date: August 19, 2021
Sheet Number: 1 Of 1
Design Number: 23-67549-10

TARGET
1000 NICOLLET MALL
MINNEAPOLIS, MN 55403

Kimley»Horn
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250 EAST 96TH STREET, #580
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DATE: 8/27/2021

TARGET
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

Project Number	T-1913
Config:	
Drawn By	EG
Checked By	KR

DETAILS

C2.0

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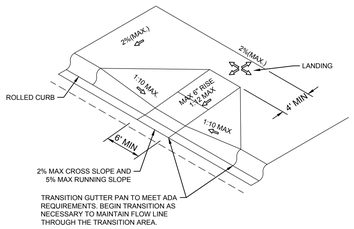
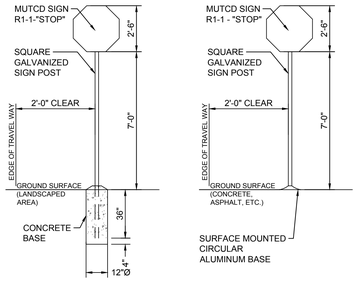
NOTES:

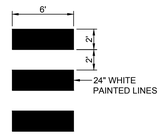
1. ALL ACCESSIBLE COMPONENTS CONSTRUCTED AS PART OF THESE PLANS SHALL COMPLY WITH THE LOCAL, STATE, AND FEDERAL REGULATIONS WHICHEVER ARE MORE STRINGENT.
2. PUBLIC SIDEWALK CURB RAMPS CONSTRUCTED WITHIN A PUBLIC RIGHT- OF -WAY, IN ABSENCE OF LOCAL ROADWAY GUIDELINES, SHALL MEET OR EXCEED LOCAL REGULATIONS.
3. CURB RAMP SURFACES (FLARES AND RAMP) SHALL HAVE A DIFFERENT TEXTURE FROM THE SURROUNDING PAVEMENT.
4. CURB RAMPS SHALL BE CONCRETE WITH STRENGTH OF 2500 PSI.
5. INSTALL 1/4" EXPANSION JOINT FILLER MATERIAL BETWEEN A NEW CURB RAMP AND THE EXISTING SIDEWALKS.
6. WATER PONDING WITHIN THE CURB RAMP LIMITS IS NOT ALLOWED.
7. NO GRADE BREAK IS ALLOWED ALONG THE RAMP SURFACE.
8. CROSS SLOPE OF THE CURB RAMP SURFACE SHALL BE LESS THAN 2%.
9. TRANSITION CHANGE IN ELEVATION IS NOT TO EXCEED 1/2" WITHIN AN ACCESSIBLE ROUTE.
10. DIAGONAL CURB RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.



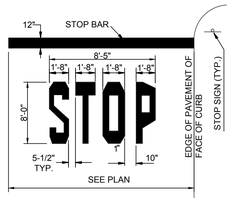
CURB RAMP DETAIL
N.T.S.



STOP SIGN POST
N.T.S.



6' WIDE CROSSWALK DETAIL
N.T.S.



NOTES:

1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
2. THESE WORDS AND BAR ARE TO BE PAINTED WHITE.

STOP BAR
N.T.S.

TARGET
1000 NICOLLET MALL
MINNEAPOLIS, MN 55403

Kimley»Horn

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250 EAST 96TH STREET, #580
INDIANAPOLIS, IN 46240
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Date	No	Description

DATE: 8/27/2021

TARGET
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

Project Number	T-1913
Config:	
Drawn By	EG
Checked By	KR

DETAILS

C2.1

Plotted By:Schlueter, Noble Sheet Set:Kha Layout:C2.1 August 27, 2021 10:39:28am C:\Users\Noble.Schlueter\OneDrive - KH\Documents\T-Stores\1913 Munster IN\CADD\T1913 DriveUp Expansion.dwg
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GENERAL NOTES:

1. THE SUBMISSION OF A BID BY THE CONTRACTOR IS NOTIFICATION THAT THE CONTRACTOR HAS TOTALLY FAMILIARIZED THEMSELF WITH THE CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND HAS AGREED TO PROVIDE THE NECESSARY LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF EACH SYSTEM IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE INDUSTRY AND IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.

2. THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT THE CONTRACTOR IS AN EXPERT AND COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF INFORMATION SUCH AS IS CONTAINED IN THESE DOCUMENTS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION AND IN COMPLETE CONFORMANCE WITH ALL APPLICABLE CODES, RULES, AND REGULATIONS. MINOR ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK AND IN THE PROPOSAL THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL.

3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.

4. THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS, EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS BASED ON THE INFORMATION PROVIDED BY THE MANUFACTURER IDENTIFIED IN THE EQUIPMENT SCHEDULE AT THE SCALE INDICATED.

5. LAYOUT OF EQUIPMENT INDICATED ON THE DRAWINGS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES AND EXACT LOCATIONS DETERMINED USING REVIEWED SHOP DRAWINGS OF SUCH EQUIPMENT. WHERE PHYSICAL INTERFERENCES OCCUR, CONSULT WITH THE OWNER AND PREPARE DATED, DIMENSIONED DRAWINGS COORDINATED WITH ALL OTHER TRADES WORKING IN THIS AREA AND CORRECTING SUCH INTERFERENCE.

6. THE CONTRACTOR SHALL SCHEDULE THEIR WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL OF THEIR WORK CAN BE INSTALLED WITHOUT DELAYING THE PROJECT. ALL WORK RELATED TO SHUTDOWN OF EXISTING SERVICES SHALL BE PERFORMED AT THE HOURS DESIGNATED BY THE OWNER WITH ALL ASSOCIATED COSTS BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER. PROVIDE ANY TEMPORARY FACILITIES REQUIRED TO PERMIT OWNER'S USE OF EXISTING FACILITIES AND SYSTEMS TO REMAIN UNDISTURBED. COORDINATE ALL WORK, INCLUDING ALL SHUTDOWNS THAT AFFECT SYSTEMS AND/OR PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION, WITH OWNER. ALL SHUTDOWNS SHALL REQUIRE WRITTEN APPROVAL FROM THE OWNER.

7. THE CONTRACTOR SHALL SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.

8. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.

11. THE CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.

12. WHERE CONDUIT, CABLES, DUCTWORK, OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE PENETRATION SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO THEIR WORK. THE CONTRACTOR SHALL SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.

14. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.

15. THE CONTRACTOR SHALL SUBMIT SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. TO BE SUBMITTED FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT AN ELECTRONIC COPY OF THE COMPLETE SHOP DRAWINGS AND CATALOG CUTS, WIRING DIAGRAMS AND ASSOCIATED DATA TO THE OWNER FOR REVIEW PRIOR TO PURCHASING EQUIPMENT OR STARTING ANY WORK. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF OWNER REVIEWED SUBMITTALS SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

16. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. THE CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. THE CONTRACTOR SHALL CHECK AND VERIFY ALL FIELD MEASUREMENTS.

17. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE OWNER WITH (3) COMPLETE BOUND COPIES OF ALL OWNER REVIEWED SUBMITTALS AND ALL OPERATION AND MAINTENANCE MANUALS

18. ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION, UNLESS NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS, AND ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND ANY DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.

19. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR SHALL SIMILARLY NOTIFY OWNER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE OWNER TO PERFORM THE FINAL PUNCHLIST INSPECTION.

21. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN THE OWNER'S FINAL PUNCH LIST, THE CONTRACTOR SHALL SUBMIT TO THE OWNER IN WRITING A LETTER OF COMPLETION CERTIFYING THAT ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND ALL AS-BUILTS, MANUALS, ETC. HAVE BEEN SUBMITTED.

22. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION, OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.

23. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT, AND MATERIALS SHALL BE REVIEWED WITH THE OWNER BEFORE BEGINNING WORK.

24. DEFINITION: UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL."

25. CODES AND STANDARDS: ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND FIRE INSURANCE CARRIER'S REQUIREMENTS.

26. MATERIALS: ALL MATERIALS FURNISHED BY THIS CONTRACTOR, SHALL BE NEW AND BEAR THE LABEL OR LISTING OF A NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY.

27. OUTLET AND SWITCH BOXES: PROVIDE AND INSTALL OUTLET BOXES OF PROPER TYPE AND SIZE AS REQUIRED AT ALL OUTLETS WHERE SHOWN. SECURED FIRMLY IN PLACE AND SET TRUE AND SQUARE AND FLUSH WITH THE FINISHED SURFACE.

28. WIRING: WIRES SHALL BE COPPER AND RATED FOR THE LOCATIONS IN WHICH THEY ARE INSTALLED. ALL RACEWAYS ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION TO BE DETERMINED ON THE JOB. CONTRACTOR SHALL ARRANGE ALL NEW CIRCUITS IN PANELS SO AS TO BALANCE THE LOAD ON ALL PHASES.

29. A TYPED DIRECTORY CARD SHALL BE PROVIDED IN EACH PANEL WITH ADDED CIRCUITS TO INDICATE THE LOADS ACTUALLY SERVED.

30. GROUNDING: SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250. PROVIDE GROUND WIRES AS REQUIRED AND RESIZE CONDUIT IF NECESSARY.

31. DEMONSTRATION OF COMPLETE ELECTRICAL SYSTEMS: UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL OBTAIN A CERTIFICATE OF APPROVAL FROM THE RESPECTIVE INSPECTION AGENCIES. CONTRACTOR SHALL NOTIFY AND MAKE ALL THE NECESSARY ARRANGEMENTS WITH THE INSPECTING AGENCY AND LOCAL AUTHORITIES SO THAT INSPECTION MAY BE CARRIED OUT AT THE PROPER TIME.

32. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROTECT ALL EXISTING EQUIPMENT OR INFRASTRUCTURE DURING CONSTRUCTION. ANY DAMAGE TO EXISTING EQUIPMENT OR INFRASTRUCTURE SHALL BE IMMEDIATELY REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

ELECTRICAL LIGHTING NOTES:

1. PRIOR TO ORDERING ANY MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY DIMENSIONS AT THE SITE AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ENGINEER. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL THE ENGINEER RENDERS A DECISION. NO EXTRA CHARGES OR COMPENSATION WILL BE ALLOWED FOR THE DIFFERENCES IN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL PROVIDE A UTILITY LOCATOR AND VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES IN PLACE UNLESS NOTED OR SPECIFIED OTHERWISE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RESTORE ALL PROPERTY, LANDSCAPING, PAVING AND DRIVEWAYS THAT ARE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION.

4. HOLES, CAVITIES, TRENCHES, AND DEPRESSIONS RESULTING FROM THE REMOVAL OF STRUCTURES OR OBSTRUCTIONS, EXCEPT IN AREAS TO BE EXCAVATED, SHALL BE BACKFILLED WITH SUITABLE MATERIAL WHICH SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698, D-2922 AND D-3017. SURPLUS EXCAVATION MATERIALS SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR.

5. ALL CONDUCTORS SHALL BE IDENTIFIED AT ALL PULL BOXES, LOAD CENTERS AND FIXTURES. ALL WIRING DEVICES SHALL HAVE A TAG ON BACK OF THE COVERPLATE IDENTIFYING THE PANEL AND CIRCUIT NUMBER FROM WHICH THEY ARE FED.

6. EACH LIGHT POLE SHALL HAVE 3/4" X 10' COPPER GROUND ROD WITH #6 CU TO GROUND LUG IN LIGHT POLE HANDHOLE. CABLE CONNECTION TO GROUND ROD SHALL BE AN EXOTHERMIC CONNECTION, MINIMUM 12" BELOW FINISHED GRADE.

7. FOR MATERIAL INSTALLED AND/OR WORK PERFORMED PRIOR TO APPROVAL, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST, IF IN THE OPINION OF THE ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE PLANS AND/OR SPECIFICATIONS.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY, STORAGE, AND HANDLING OF ALL MATERIALS AND EQUIPMENT PRIOR TO FINAL ACCEPTANCE. ANY DAMAGED MATERIAL OR EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

9. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL ENERGIZE AND OPERATE THE ENTIRE LIGHTING SYSTEM, FROM SUNSET TO SUNRISE FOR TWO (2) CONSECUTIVE DAYS WITHOUT INTERRUPTION OR FAILURE. IF ANY EQUIPMENT OR MATERIAL SHOULD FAIL, IT SHALL BE REPLACED IMMEDIATELY AND RETESTED.

10. "AS-BUILT" DRAWING REQUIREMENTS SHALL CONSIST OF RECORDING, BY THE CONTRACTOR, ANY CHANGE OR DEVIATION ON A SET OF APPROVED PLANS. PLANS SHALL BE FURNISHED TO THE INSPECTOR AT THE COMPLETION OF THE PROJECT. CONTRACTOR SHALL COORDINATE INSPECTION WITH RESIDENT ENGINEER. FINAL PAYMENT SHALL NOT BE MADE UNTIL THE AS-BUILT PRINTS ARE ACCEPTED BY THE RESIDENT ENGINEER.

11. TRENCH, CONDUIT, AND PULL BOXES SHALL BE FURNISHED AND INSTALLED PER TARGET STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, LATEST EDITION AND ANY APPROVED/ACCEPTED AMENDMENT OR REVISION.

12. CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #10 AWG WITH #10 GND, UNLESS OTHERWISE NOTED.

13. UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC, MINIMUM DEPTH 30", MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

14. HORIZONTAL DIRECTIONAL DRILLED (HDD) CONDUITS TO BE SCHEDULE 80 HDPE, MINIMUM DEPTH 30", MINIMUM SIZE 1/2", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

15. OUTDOOR CONDUITS TO BE GALVANIZED RIGID STEEL (GRS), MINIMUM SIZE 1", UNLESS OTHERWISE NOTED ON THE PLANS. GRS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL GRS CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAP 50 10 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.

ABBREVIATIONS:

AFG	ABOVE FINISHED GRADE
AIC	AMPS INTERRUPTING CURRENT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AWG	AMERICAN WIRE GAUGE
DIA	DIAMETER
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
FVNR	FULL VOLTAGE NON-REVERSING STARTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HDD	HORIZONTAL DIRECTIONAL DRILLING
HDPE	HIGH DENSITY POLYETHYLENE
IEEE	INSTITUTE FOR ELECTRICAL AND ELECTRONIC ENGINEERS
IMC	INTERMEDIATE METAL CONDUIT
KW	KILOWATT
KVA	KILOVOLT AMPERES
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MH	MOUNTING HEIGHT
MCC	MOTOR CONTROL CENTER
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
PVC	POLYVINYL CHLORIDE
SCCR	SHORT CIRCUIT CURRENT RATING
SES	SERVICE ENTRANCE SECTION
SS	STAINLESS STEEL
TSP	TWISTED SHIELDED PAIR
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITERS LABORATORY
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIRE
WP	WEATHERPROOF
WWTP	WASTE WATER TREATMENT PLANT
XFMR	TRANSFORMER
3P	THREE PHASE

*GENERAL LIST OF ABBREVIATIONS; SOME MAY OR MAY NOT APPLY.

SUMMARY OF BUILDING CODES:

2009 INDIANA ELECTRICAL CODE (NFPA 70-2008)
2010 INDIANA ENERGY CONSERVATION CODE (ASHRAE 90.1, 2007 EDITION, AS AMENDED)
2014 INDIANA BUILDING CODE (IBC, 2012 EDITION, 1ST PRINTING) ANSI A117.1-2009

LEGEND:

	PROPOSED UNDERGROUND ELECTRICAL CONDUIT VIA HORIZONTAL DIRECTIONAL DRILLING (HDD)
	EXISTING UNDERGROUND ELECTRICAL CONDUIT
OR	PROPOSED SITE LIGHTING LED POLE FIXTURE SEE PLANS FOR ARRANGEMENT AND QUANTITY
OR	EXISTING SITE LIGHTING LED POLE FIXTURE SEE PLANS FOR ARRANGEMENT AND QUANTITY
X	CONSTRUCTION NOTE
	SOLAR DRIVE UP BEACON

TARGET
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Date	No	Description

ANES RAHMAN REGISTERED No. 11700009 STATE OF INDIANA PROFESSIONAL ENGINEER
Exp 7/31/22

DATE: 8/27/2021

TARGET
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

Project Number	T-1913
Config:	
Drawn By	YSH
Checked By	AR

SITE LIGHTING GENERAL NOTES

E1.0

Plotted By: Maya, Danielle Sheet Set:Kha Layout:E1.0 August 27, 2021 10:38:05am \\kimleyhorn.sharepoint.com@SSL\DavWWWRoot\sites\TargetDivExpansion\Shared Documents\T-Stores\1913 Munster IN\CADD\T1913 DriveUp Expansion (Site Lighting-Electrical).dwg
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LOAD CALCULATION	
LOAD DESCRIPTION	WATTS
PROPOSED LOADS	
PROPOSED LED FIXTURES (ALL)	1496
+ 25% PER NEC	374
TOTAL PROPOSED LOAD	1870

SITE LIGHTING CONSTRUCTION NOTES

1. COORDINATE SITE ELECTRICAL WORK WITH OWNER, SITE MANAGER AND ALL APPROPRIATE TRADES. EXISTING CONDUITS TO BE MANDRELLED AND REUSED; REPLACE IF COLLAPSED OR BLOCKED. INTERCEPT AND EXTEND CONDUITS AND CONDUCTORS AS REQUIRED. RE-USE EXISTING SAME SIZE OR LARGER WIRE AFTER TESTING EXISTING WIRE AND INSULATION PER NEC STANDARDS.
2. EXISTING SITE LIGHTING POLE, FIXTURES, AND FOUNDATION TO REMAIN. PROTECT IN PLACE.
3. EXISTING ELECTRICAL SITE LIGHTING CONDUIT. FIELD VERIFY LOCATIONS AND PROTECT IN PLACE.
4. FURNISH AND INSTALL (2) NEW LED SITE LIGHTING FIXTURES COOPER GLEON LUMINAIRE LIGHT MODEL # GLEON-SA9B-740-8-T2R-DP-PER7U-MS/DIM-L40 AT 37' MOUNTING HEIGHT WITH NEW MAST ARMS ON EXISTING POLE AND FOUNDATION. PROVIDE (2) #12 AWG CU CONDUCTORS AND (1) #12 AWG CU GROUND FROM POLE HAND HOLE TO EACH FIXTURE AND CONNECT FOR COMPLETE SYSTEM. COORDINATE WITH OWNER TO VERIFY ALL PREVIOUS CIRCUITS AND CONNECTIONS HAVE BEEN REESTABLISHED.
5. SOLAR BEACON. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
6. CONTRACTOR SHALL IDENTIFY EXISTING LIGHTING CIRCUIT TO UTILIZE FOR CONNECTING NEW SITE LIGHTING FIXTURES. IDENTIFY THE EXISTING LIGHTING CIRCUIT'S SOURCE PANEL, CIRCUIT NUMBER AND CIRCUIT BREAKER SIZE. VERIFY EXISTING CAPACITY BY PERFORMING 30-DAY LOAD STUDY OR NEC 220.87 APPROVED METHOD. IF THE TOTAL NEW LOAD (EXISTING PLUS PROPOSED) EXCEEDS THE ALLOWABLE LOADS OF THE CIRCUIT BREAKER OR PANEL, DO NOT CONNECT THE NEW LOADS WITHOUT ADEQUATE CAPACITY. PROVIDE UPDATED PANEL SCHEDULES AS NEEDED.

GENERAL CONSTRUCTION NOTES

1. ALL EXISTING ELECTRICAL INFORMATION INCLUDING LUMINAIRE TYPES, PANEL NAMES, CIRCUIT NUMBERS, CONDUIT/CONDUCTOR SIZES AND ROUTING, ETC. ARE UNKNOWN AND BASED ON EXISTING DOCUMENTS AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL VERIFY INFORMATION DURING CONSTRUCTION AND PROVIDE UPDATED AS-BUILTS UPON COMPLETION.
2. ALL CONDUIT ROUTING AND EQUIPMENT LOCATIONS ARE SCHEMATIC. ELECTRICAL CONTRACTOR SHALL DETERMINE BEST ROUTING PATH BASED ON FIELD CONDITIONS WITH OWNER APPROVAL.
3. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER(S) FOR DETAILED CONNECTIONS REQUIREMENTS AND PROVIDE MATERIALS AND INSTALLATION FOR A COMPLETE AND OPERATIONAL SYSTEM.
4. THE CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN SHALL BE MAINTAINED.
5. ALL NEW EQUIPMENT SHALL BE CONNECTED TO AN APPROPRIATELY SIZED CIRCUIT IN AN EXISTING PANEL AND/OR LIGHTING CONTROLLER. CONTRACTOR SHALL VERIFY CIRCUITING PRIOR TO ROUGH-IN. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/ENGINEER PRIOR TO ANY CONNECTIONS.
6. CONTRACTOR SHALL VERIFY EXISTING CIRCUITS ARE ADEQUATELY SIZED FOR ANY EQUIPMENT THAT IS TO BE REPLACED PRIOR TO CONNECTING NEW EQUIPMENT.
7. ALL CIRCUITING THAT IS INDICATED SHALL BE FIELD VERIFIED PRIOR TO ROUGH-IN. THE CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS CONNECTED TO ADEQUATELY SIZED CIRCUIT BREAKERS AND CONDUCTORS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/ENGINEER PRIOR TO ANY CONNECTIONS.
8. CONTRACTOR SHALL ENSURE EXISTING PANELS/LIGHTING CONTROLLERS HAVE ADEQUATE CAPACITY FOR NEW ELECTRICAL LOADS PRIOR TO ANY NEW OR REPLACED EQUIPMENT BEING CONNECTED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/ENGINEER PRIOR TO ANY CONNECTIONS.
9. CONTRACTOR SHALL RESTORE AND REPAIR ALL DISTURBED LANDSCAPE, HARDSCAPE, ASPHALT, CURB AREAS ETC. TO ORIGINAL STATE OR BETTER.
10. EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH OWNER AND FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO BEGINNING WORK. ANY EXISTING SYSTEMS (I.E. IRRIGATION, WATER, GAS, SEWER, ETC.) IMPACTED, SHALL BE REPAIRED/RESTORED TO ORIGINAL STATE OR BETTER.

KEY MAP
1" = 150'

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20

Know what's **below.**
Call before you dig.

PROPOSED DRIVE UP STALLS
1" = 10'

TARGET
1000 NICOLLET MALL
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Date	No	Description

M. INES RAMAN
REGISTERED
No. 11700009
STATE OF
INDIANA
PROFESSIONAL ENGINEER
Exp 7/31/22

DATE: 8/27/2021

TARGET
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

Project Number	T-1913
Config:	
Drawn By	YSH
Checked By	AR

SITE LIGHTING PLAN

E2.0

EXISTING 5MQ-8-2 AND 5MQ-7-2 TO BE ROTATED 90 DEGREES. BOTH WILL REQUIRE EXTENDED ARMS.

Luminaire Schedule

Symbol	Qty	Label	LLF	Description	Filename	Lum. Watts	Lum. Lumens	BUG Rating
	6	5MQ-7-2	0.900	GLEON-AF-07-LED-E1-5MQ-800	GLEON-AF-07-LED-E1-5MQ-800.ies	295	35734	B5-U0-G4
	3	5MQ-8-2	0.900	GLEON-AF-08-LED-E1-5MQ-800	GLEON-AF-08-LED-E1-5MQ-800.ies	334	40489	B5-U0-G4
	1	T4FT-9-1	0.900	GLEON-AF-09-LED-E1-T4FT-800	GLEON-AF-09-LED-E1-T4FT-800.ies	374	43252	B3-U0-G5
	1	T3R-4-1	0.900	GLEON-AF-04-LED-E1-T3R-800	GLEON-AF-04-LED-E1-T3R-800.ies	171	19835	B2-U0-G3
	1	T3R-3-1	0.900	GLEON-AF-03-LED-E1-T3R-800	GLEON-AF-03-LED-E1-T3R-800.ies	124	15011	B2-U0-G3
	1	T2-8-2	0.900	GLEON-AF-08-LED-E1-T2-800	GLEON-AF-08-LED-E1-T2-800.ies	334	37823	B3-U0-G4
	1	5MQ-4-1	0.900	GLEON-AF-04-LED-E1-5MQ-800	GLEON-AF-04-LED-E1-5MQ-800.ies	171	20380	B4-U0-G2
	1	5MQ-10-1	0.900	GLEON-AF-10-LED-E1-5MQ-800	GLEON-AF-10-LED-E1-5MQ-800.ies	419	50006	B5-U0-G4
	2	T2R-09 (2)	0.900	GLEON-SA9B-740-8-T2R-DP-PER7U-MS/DIM-L40	GLEON-SA9B-740-U-T2R.ies	374	53224	B3-U0-G5

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	0.90	14.0	0.0	N.A.	N.A.
STORE ENTRANCE	Illuminance	Fc	5.71	14.4	2.9	1.97	4.97
DRIVE UP LANES	Illuminance	Fc	9.96	14.0	6.6	1.51	2.12
EDGES OF PARKING LOT	Illuminance	Fc	3.10	11.2	1.6	1.94	7.00
MAIN PARKING LOT	Illuminance	Fc	4.50	14.0	2.0	2.25	7.00
STORE ENTRY	Illuminance	Fc	3.82	6.0	2.2	1.74	2.73
STORE ENTRY- SIDE	Illuminance	Fc	3.68	5.0	2.6	1.42	1.92

= OCC SENSOR MASKING (RED IS AREA TO MASK)

AL WATTS
al Watts = 9091

GRAPHIC SCALE IN FEET
0 25 50 100

NOTES

1. THIS PHOTOMETRIC PLAN PREPARED BY OTHERS IS TO BE UTILIZED FOR REFERENCE PURPOSES ONLY.
2. EXISTING PARKING LOT LIGHTING, OUTSIDE OF THE LIMITS OF LIGHTING ANALYSIS, WAS NOT CALCULATED FOR THIS PROJECT.
3. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOT-CANDLES.
4. THIS PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. CONTRACTOR MUST BRING TO THE DESIGNERS'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH THE INFORMATION PROVIDED IN THIS PLAN.
5. NO BUILDING LUMINAIRES WERE INCLUDED IN THE CALCULATIONS FOR THE DRVE UP AISLE.

TARGET
1000 NICOLLET MALL
MINNEAPOLIS, MN 55403

Kimley»Horn
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250 EAST 96TH STREET, #580
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PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

Date	No	Description

M. ANEES RAHMAN
REGISTERED
No. 11700009
STATE OF
GEORGIA
PROFESSIONAL ENGINEER
Exp 7/31/22

DATE: 8/27/2021

TARGET
T-1913 MUNSTER
8005 CALUMET AVE
MUNSTER, IN 46321-1217

Project Number	T-1913
Config:	
Drawn By	YSH
Checked By	AR

PHOTOMETRIC PLAN

E3.0

Plotted By:Mora, Danielle Sheet Set:Kha Layout:E3.0 August 27, 2021 10:38:20am \\kimleyhorn.sharepoint.com@SSL\DavWWWRoot\sites\TargetDUEexpansions\Shared Documents_T- Stores\1913 Munster IN\CADD\T1913 DriveUp Expansion (Site Lighting-Electrical).dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

EXISTING 5MQ-8-2 AND 5MQ-7-2 TO BE ROTATED 90 DEGREES. BOTH WILL REQUIRE EXTENDED ARMS

Luminaire Schedule

Symbol	Qty	Label	LLF	Description	Filename	Lum. Watts	Lum. Lumens	BUG Rating
	2	T2R-09 (2) (S)	0.900	GLEON-SA9B-740-8-T2R-DP-PER7U-MS/DIM-L40-EA	GLEON-SA9B-740-U-T2R.ies	374	53224	B3-U0-G5
	4	B	0.750	GMA911253V-FG	GSM-XX-1000-HPS-XX-3V-FG.ies	1000	76599	B5-U0-G5
	1	A3	0.750	GMA91125AS-FG	GSM-XX-1000-HPS-XX-AS-FG.ies	1000	80872	B5-U0-G5
	5	A2	0.750	GMA91125AS-FG	GSM-XX-1000-HPS-XX-AS-FG.ies	1000	80872	B5-U0-G5
	6	5MQ-07 (2)	0.900	GLEON-AF-07-LED-E1-5MQ-800	GLEON-AF-07-LED-E1-5MQ-800.ies	295	35734	B5-U0-G4
	3	5MQ-08 (2)	0.900	GLEON-AF-08-LED-E1-5MQ-800	GLEON-AF-08-LED-E1-5MQ-800.ies	334	40489	B5-U0-G4
	1	5MQ-10	0.900	GLEON-AF-10-LED-E1-5MQ-800	GLEON-AF-10-LED-E1-5MQ-800.ies	419	50006	B5-U0-G4
	1	5MQ-04	0.900	GLEON-AF-04-LED-E1-5MQ-800	GLEON-AF-04-LED-E1-5MQ-800.ies	171	20380	B4-U0-G2
	1	T2-8 (2)	0.900	GLEON-AF-08-LED-E1-T2-800	GLEON-AF-08-LED-E1-T2-800.ies	334	37823	B3-U0-G4
	1	T3R-03	0.900	GLEON-AF-03-LED-E1-T3R-800	GLEON-AF-03-LED-E1-T3R-800.ies	124	15011	B2-U0-G3
	1	T3R-04	0.900	GLEON-AF-04-LED-E1-T3R-800	GLEON-AF-04-LED-E1-T3R-800.ies	171	19835	B2-U0-G3
	1	T4FT-09	0.900	GLEON-AF-09-LED-E1-T4FT-800	GLEON-AF-09-LED-E1-T4FT-800.ies	374	43252	B3-U0-G5

Total Watts = 26091

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	3.96	14.1	0.4	9.90	35.25

= OCC SENSOR MASKING (RED IS AREA TO MASK)

villa LIGHTING

#	Date	Comments

Revisions

Date:1/5/2022

TARGET - 1913
MUNSTER, IN

Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Typical Applications

Outdoor • Parking Lots • Walkways • Roadways • Building Areas

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

Product Certifications

Product Features

LumenSafe Technology · Enlighted · WaveLinx · Light ARchitect™

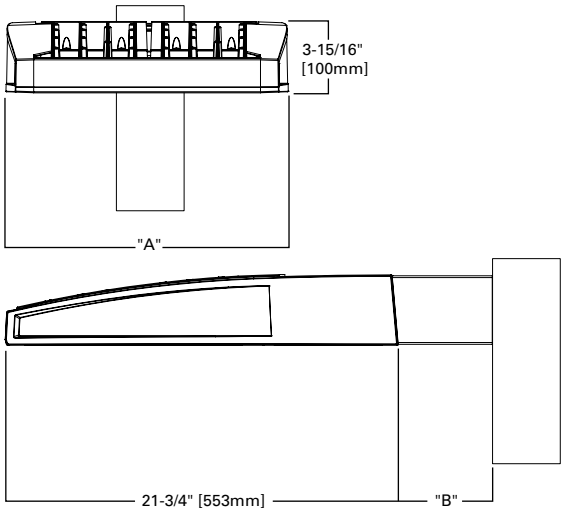
Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt

Connected Systems

- WaveLinx
- Enlighted

Dimensional Details



Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" Quick Mount Arm Length	"B" Quick Mount Extended Arm Length
1-4	15-1/2"	7"	10"	10-5/8"	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	--
9-10	33-3/4"	7"	16"	--	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

Ordering Information

SAMPLE NUMBER: **GLEON-SA4C-740-U-T4FT-GM**

Product Family [1, 2]	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON=Galleon	**SA1**=1 Square **SA2**=2 Squares **SA3**=3 Squares **SA4**=4 Squares **SA5**=5 Squares [4] **SA6**=6 Squares **SA7**=7 Squares [5] **SA8**=8 Squares [5] **SA9**=9 Squares [6] **SA0**=10 Squares [6]	**A**=600mA **B**=800mA **C**=1000mA **D**=1200mA [16]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [14, 16]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [7, 8] **9**=347V [7]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QMEA**=Quick Mount Arm (Extended Length) [12]	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately)
DIM=External 0-10V Dimming Leads [19, 20] **F**=Single Fuse (120, 277 or 347V Specify Voltage) **FF**=Double Fuse (208, 240 or 480V Specify Voltage) **20K**=Series 20kV UL 1449 Surge Protective Device **2L**=Two Circuits [17, 18] **HA**=50°C High Ambient **HSS**=Installed House Side Shield [28] **GRSBK**=Glare Reducing Shield, Black [23] **GRSWH**=Glare Reducing Shield, White [23] **LCF**=Light Square Trim Painted to Match Housing [27] **MT**=Installed Mesh Top **TH**=Tool-less Door Hardware **CC**=Coastal Construction finish [3] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **CE**=CE Marking [29] **AHD145**=After Hours Dim, 5 Hours [22] **AHD245**=After Hours Dim, 6 Hours [22] **AHD255**=After Hours Dim, 7 Hours [22] **AHD355**=After Hours Dim, 8 Hours [22] **DALI**=DALI Drivers	**BPC**=Button Type Photocontrol **PR**=NEMA 3-PIN Photocontrol Receptacle **PR7**=NEMA 7-PIN Photocontrol Receptacle [21] **SPB2=**Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting [34] **SPB4=**Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting [34] **MS-L20**=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24] **MS-L40W**=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24] **MS/X-L20**=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24, 25] **MS/X-L40W**=Bi-Level Motion Sensor, 21' - 40' Mounting Height [24, 25] **MS/DIM-L20**=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24] **MS/DIM-L40W**=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24] **ZW**=WaveLinx Module and 4-PIN Receptacle **ZD**=WaveLinx Module with DALI driver and 4-PIN Receptacle **SWPD4XX**=WaveLinx Sensor Only, 7'-15' [13, 32, 33] **SWPD5XX**=WaveLinx Sensor Only, 15'-40' [13, 32, 33] **WOBXX**=WaveLinx Sensor with Bluetooth, 7'-15' [13, 32] **WOFXX**=WaveLinx Sensor with Bluetooth, 15'-40' [13, 32] **LWR-LW**=Enlighted Sensor, 8'–16' Mounting Height [26] **LWR-LN**=Enlighted Sensor, 16'–40' Mounting Height [26] **DIM10-MS/DIM-L08**=Synapse Occupancy Sensor (<8' Mounting) [19] **DIM10-MS/DIM-L20**=Synapse Occupancy Sensor (9'-20' Mounting) [19] **DIM10-MS/DIM-L40**=Synapse Occupancy Sensor (21'-40' Mounting) [19]	**OA/RA1016**=NEMA Photocontrol Multi-Tap - 105-285V **OA/RA1027**=NEMA Photocontrol - 480V **OA/RA1201**=NEMA Photocontrol - 347V **OA/RA1013**=Photocontrol Shorting Cap **OA/RA1014**=120V Photocontrol **MA1252**=10kV Surge Module Replacement **MA1036-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1037-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon **MA1197-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1188-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1189-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1190-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1191-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1038-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon **MA1039-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon **MA1192-XX**=3@120° Tenon Adapter for 3-1/2" O.D. Tenon **MA1193-XX**=4@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1194-XX**=2@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1195-XX**=3@90° Tenon Adapter for 3-1/2" O.D. Tenon **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [24] **GLEON-MT1**=Field Installed Mesh Top for 1-4 Light Squares **GLEON-MT2**=Field Installed Mesh Top for 5-6 Light Squares **GLEON-MT3**=Field Installed Mesh Top for 7-8 Light Squares **GLEON-MT4**=Field Installed Mesh Top for 9-10 Light Squares **GLEON-QM**=Quick Mount Arm Kit [11] **GLEON-QMEA**=Quick Mount Extended Arm Kit [12] **LS/HSS**=Field Installed House Side Shield [28, 30] **LS/GRSBK**=Glare Reducing Shield, Black [23, 30] **LS/GRSWH**=Glare Reducing Shield, White [23, 30] **LS/PFS**=Perimeter Shield, Black [15] **WOLC-7P-10A**=WaveLinx Outdoor Control Module [19, 31] **SWPD4-XX**=Wavelinx Wireless Sensor, 7'–15' Mounting Height [13, 19, 32, 33] **SWPD5-XX**=Wavelinx Wireless Sensor, 15'–40' Mounting Height [13, 19, 32, 33]

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. Not compatible with MS/4-LXX or MS/1-LXX sensors.
5. Not compatible with extended quick mount arm (QMEA).
6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.)
9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
10. Factory installed.
11. Maximum 8 light squares.
12. Maximum 6 light squares.
13. Requires ZW or ZD receptacle.
14. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
15. Set of 4 pcs. One set required per Light Square.
16. Not available with HA option.
17. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
18. Not available with Enlighted wireless sensors.
19. Cannot be used with other control options.
20. Low voltage control lead brought out 18" outside fixture.
21. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell.
22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
23. Not for use with T4FT, T4W or SL4 optics. See IES files for details.
24. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
25. Replace X with number of Light Squares operating in low output mode.
26. Enlighted wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities.
27. Not available with house side shield (HSS).
28. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected.
29. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
30. One required for each Light Square.
31. Requires PR7.
32. Replace XX with sensor color (WH, BZ or BK.)
33. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
34. Smart device with mobile application required to change system defaults. See controls section for details.

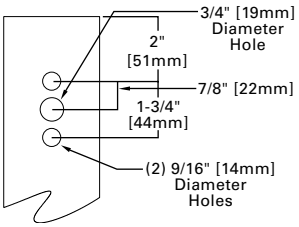
LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology	**D**=Standard Dome Camera **H**=Hi-Res Dome Camera **Z**=Remote PTZ Camera	**C**=Cellular, No SIM **A**=Cellular, AT&T **V**=Cellular, Verizon **S**=Cellular, Sprint	**R**=Cellular, Rogers **W**=Wi-Fi Networking w/ Omni-Directional Antenna **E**=Ethernet Networking

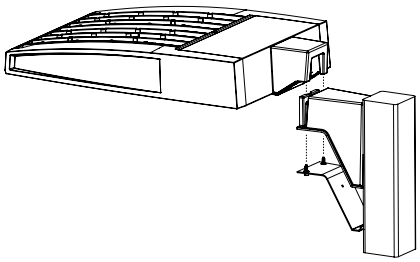
Mounting Details

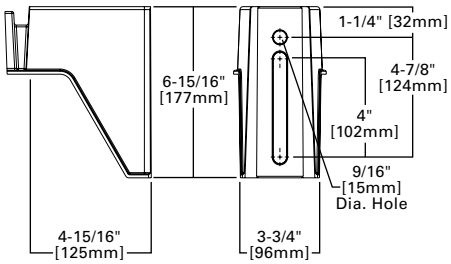
Standard Arm (Drilling Pattern)

TYPE "N"

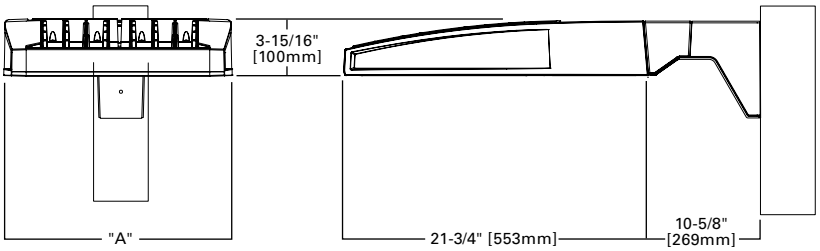


Quick Mount Arm (Includes fixture adapter)

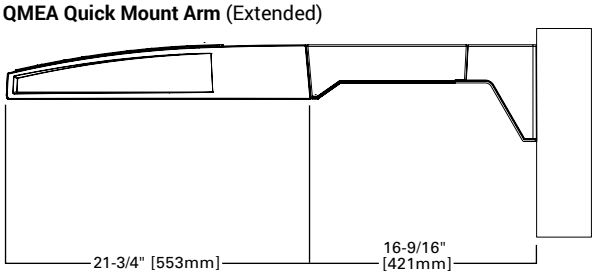




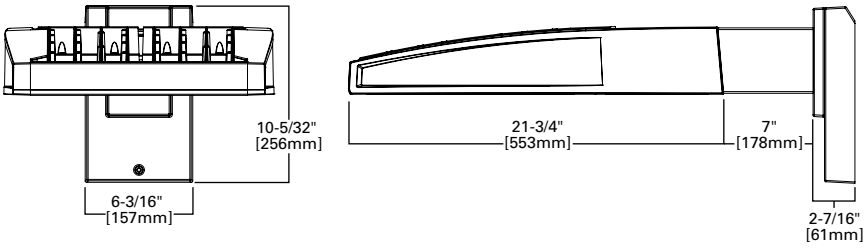
QM Quick Mount Arm (Standard)



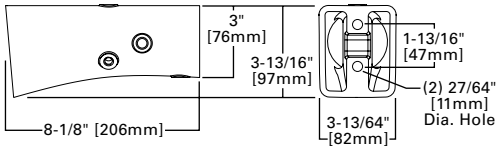
QMEA Quick Mount Arm (Extended)



Standard Wall Mount

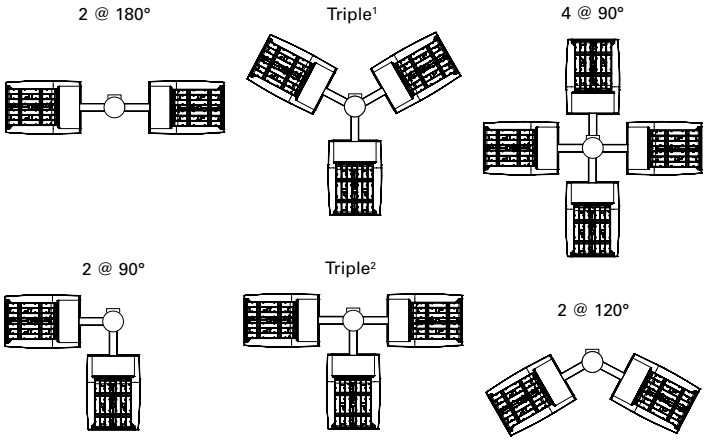


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°.

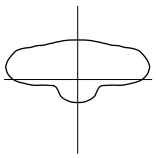
Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with Quick Mount Arm (lbs.)	EPA with Quick Mount Arm (Sq. Ft.)	Weight with Quick Mount Extended Arm (lbs.)	EPA with Quick Mount Extended Arm (Sq. Ft.)
1-4	33	0.96	35	1.11	38	1.11
5-6	44	1.00	46	1.11	49	1.11
7-8	54	1.07	56	1.11	--	--
9-10	63	1.12	--	--	--	--

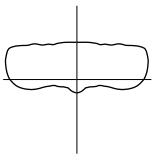
Optical Distributions

Asymmetric Area Distributions

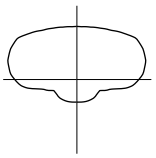
T2 (Type II)



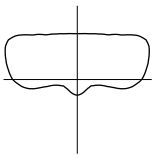
SL2 (Type II with Spill Control)



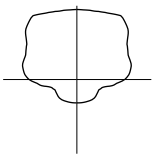
T3 (Type III)



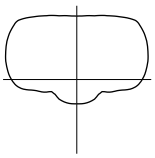
SL3 (Type III with Spill Control)



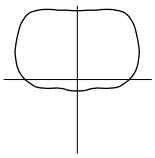
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

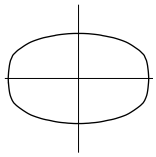


SL4 (Type IV with Spill Control)

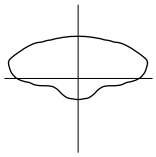


Asymmetric Roadway Distributions

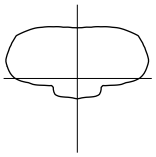
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

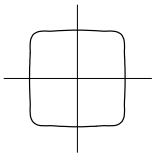


T3R (Type III Roadway)

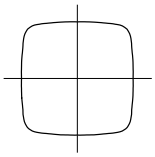


Symmetric Distributions

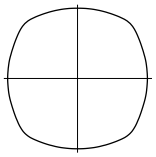
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

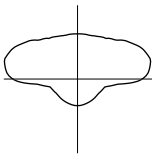


5WQ (Type V Square Wide)

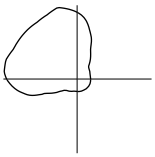


Specialized Distributions

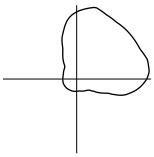
AFL (Automotive Frontline)



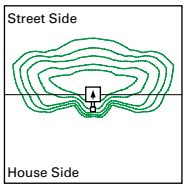
SLL (90° Spill Light Eliminator Left)



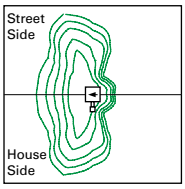
SLR (90° Spill Light Eliminator Right)



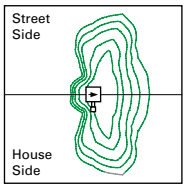
Rotated Optics



Standard



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray assembly for ease of maintenance
- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table
- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year warranty

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

View GLEON IES files

Nominal Power Lumens (1.2A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (1A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SLL/ SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (800mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (600mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Control Options

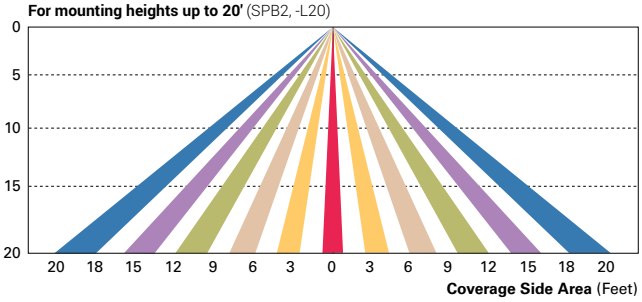
0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

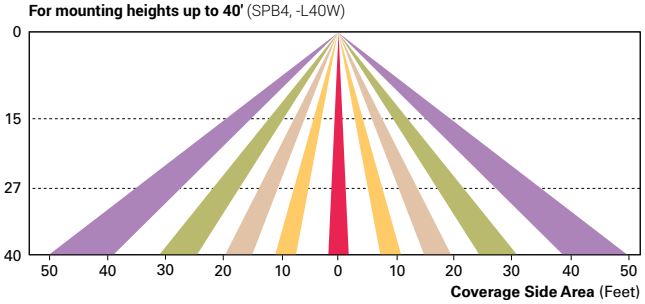
After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.

For mounting heights up to 20' (SPB2, -L20)

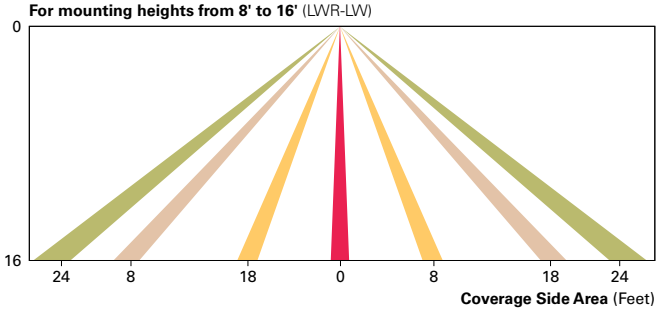


For mounting heights up to 40' (SPB4, -L40W)

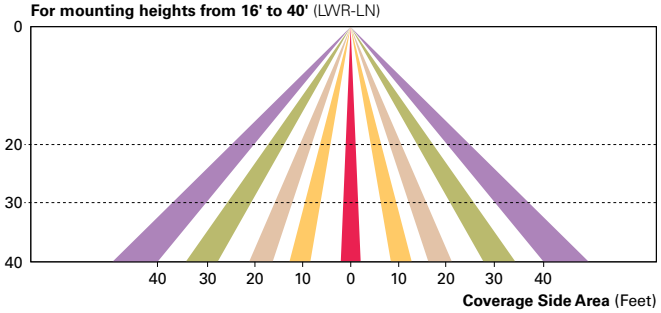


Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)
Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Cooper Lighting Solutions brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

Synapse (DIM10)
SimplySNAP integrated wireless controls system by Synapse. Includes factory installed DIM10 Synapse control module and MS/DC motion sensor; requires additional Synapse system components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

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Specifications and dimensions
subject to change without notice.