



690 Chesterfield Pkwy W • Chesterfield MO 63017-0760
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Planning Commission Staff Report

Project Type: Lighting Plan

Meeting Date: January 9, 2012

From: Kristian Corbin, Project Planner

Location: South of Interstate 64 U.S. Highway 40/61 west of the intersection of Boone's Crossing and Chesterfield Airport Road.

Description: **Chesterfield Commons Six, Lot 5A (hhgregg) Lighting Plan:** A Lighting Plan for a 2.43 acre tract of land zoned "C8" Planned Commercial District located south of Interstate 64 U.S. Highway 40/61 west of the intersection of Boone's Crossing and Chesterfield Airport Road.

PROPOSAL SUMMARY

Civil Engineering Design Consultants, on behalf of hhgregg and THF Realty, has submitted a Lighting Plan for Planning Commission review. The request is to illuminate the 2.43 acre tract of land for a proposed retail store located on Lot 5A of the Chesterfield Commons Six Development.

LAND USE AND ZONING HISTORY OF THE SUBJECT SITE

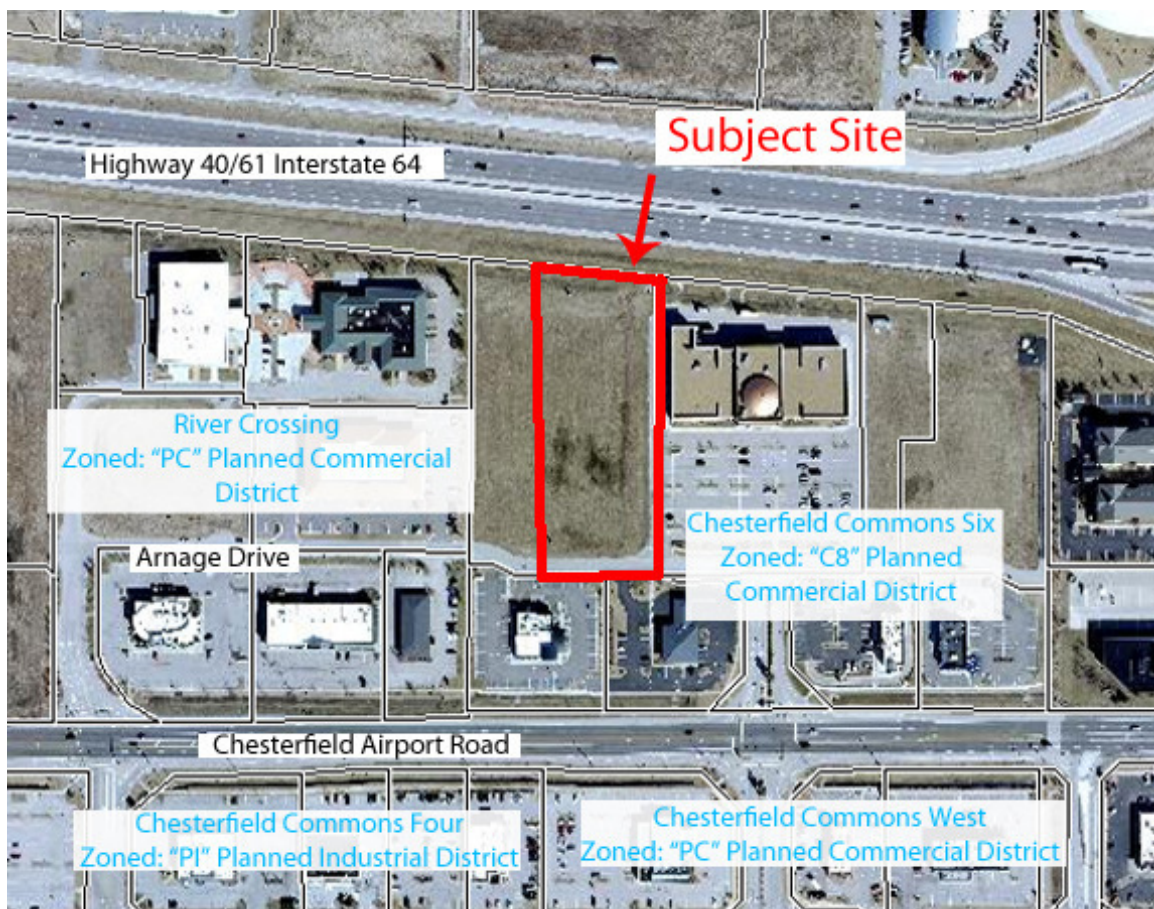
The subject site was zoned "C8" Planned Commercial District by St. Louis County Ordinance 13,933 in 1988. In May of 2004, City of Chesterfield Ordinance 2096 repealed St. Louis County Ordinance 13,933 to permit drive-through restaurant and to increase the maximum height of the light standards. No other amendments to the governing ordinance occurred.

The Site Development Concept Plan was approved in November of 2002 for the original layout of the development. There was an amendment to the Site Development Concept Plan in April of 2005 to show lot 7 being split into Lots 7A and 7B.

On December 5, 2011, a Lot Split Plat was approved dividing Lot 5 into Lots 5A and 5B. Following the approval of the Lot Split, the Site Development Section Plan, Landscape Plan and Architectural Elevations were presented before and approved by the Planning Commission on December 12, 2011.

Land Use and Zoning of Surrounding Properties

Direction	Land Use	Zoning
North	Undeveloped	"PI" Planned Industrial District
South	Restaurant	"C8" Planned Commercial District
East	Retail	"C8" Planned Commercial District
West	Retail	"PC" Planned Commercial District



STAFF ANALYSIS

Zoning

The subject site is currently zoned "C8" Planned Commercial District under the terms and conditions of City of Chesterfield Ordinance Number 2096. The submittal was reviewed against the requirements of Ordinance 2096 and all applicable Zoning

Ordinance requirements. The site adheres to the applicable Zoning Ordinance requirements and the site specific governing ordinance.

Lighting

The Lighting Plan has been submitted showing pole mounted parking lot fixtures, and building mounted utilitarian and decorative fixtures. All fixture designs adhere to the City of Chesterfield Lighting Ordinance. The proposed mounting height of the parking lot fixtures is thirty-three (33) feet. Though the Lighting Ordinance sets the maximum mounting height of parking lot light fixtures at twenty (20) feet, the governing ordinance of the site permits mounting heights of parking lot fixtures up to thirty (33) feet in height.

DEPARTMENT INPUT

Staff has reviewed the Lighting Plan and has found the application to be in conformance with the site specific ordinance and all other applicable Zoning Ordinance requirements. Staff recommends approval of the proposal as presented.

MOTION

The following options are provided to the Planning Commission for consideration relative to this application:

- 1) "I move to approve (or deny) the Lighting Plan for Chesterfield Commons Six, Lot 5A.
- 2) "I move to approve the Lighting Plan for Chesterfield Commons Six, Lot 5A with the following conditions..." (Conditions may be added, eliminated, altered or modified)

Cc: Michael G. Herring, City Administrator
Rob Heggie, City Attorney
Michael O. Geisel, Director of Planning, Public Works, and Parks
Aimee Nassif, Planning and Development Services Director

Attachments: Lighting Plan
Lighting Cut Sheets



FEATURES & SPECIFICATIONS

INTENDED USE — Use for parking lots, streets and surrounding areas.

CONSTRUCTION — Heavy gauge die-formed aluminum housing is fabricated using robotic continuous seam-weld process for weather-tight integrity. Integral structural support plate for mounting arm and electrical components ensures rigidity and strength. Hinged aluminum door frame incorporates stainless steel hardware. Continuous silicone gasketing surrounds lens for weather-tight seal. Optional tool-less hardware is available to maximize installation and maintenance ease.

Lens: Thermal shock resistant tempered glass lens. Choice of contoured drop lens or flat lens is available in standard product. Standard finish is dark bronze corrosion resistant electrostatically applied powder paint. Optional linear embossed accent reveals are available.

OPTICS — Most flat lens configurations meet full-cutoff criteria. See www.lithonia.com for details. Vertical-lamp reflectors are 1-piece spun and formed anodized aluminum. Specialized distributions available for either drop lens or flat lens. Reflectors are independently designed to optimize light output for the lens type. Horizontal-lamp reflectors also available.

ELECTRICAL — All electrical components are mounted to a heavy-gauge plate to maximize heat dissipation and ensure structural integrity for optimal component life. Ballast: Constant wattage autotransformer. Metal Halide: Super CWA (pulse start ballast), 88% efficient and EISA legislation compliant, is required for 175-400W (SCWA option) for US shipments only. CSA, NOM or INTL required for probe start shipments outside of the US. Pulse-start ballast (SCWA) required for 200W, 320W, 350W, or 450W. Ballast is 100% factory-tested.

Socket: Mogul-base porcelain socket with copper alloy, nickel-plated screw shell and center contact. Vertically-oriented for types SYM, ASY, and VFA distributions. Horizontal position-oriented for types R2, R3 and R4. UL listed 1500W-600V, 4KV pulse rated. Reflectors are rotatable and interchangeable.

INSTALLATION — Extruded aluminum arm with integral splice compartment. Standard arm is 9" in length. Aluminum fitter for 4" to 6" OD poles.

LISTINGS — UL Listed to US and Canadian safety standards (see Options). NOM Certified (see options). UL listed for 25°C ambient and wet locations. Optical chamber IP65 rated.

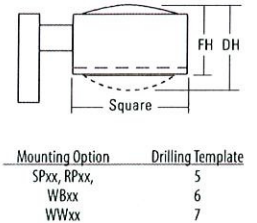
Note: Specifications subject to change without notice.

Catalog Number	KFL2 1000M SYMFL
Notes	
Type	



Specifications

Square: 21-1/2 (54.6)
 Flat lens height: 14 (35.5)
 Drop lens height: 17 (43.2)
Arm mount
 EPA: 2.8 ft² (0.25 m²)
 Weight: +2 lbs to *
 *Weight: 53 lbs (24 kg) Overall Height: 22-3/4 (57.8)
 *Weight as configured in example below.



Dimensions in inches (centimeters) unless otherwise specified.

Square Area Lighting

KVF2

METAL HALIDE: 175-1000W
 HIGH PRESSURE SODIUM: 250-1000W
 20' to 40' Mounting

ORDERING INFORMATION

For shortest lead times, configure products using **bolded options**.

Example: KVF2 400M SYMDL TB SCWA SP09 LPI

KVF2	1000M	SYMFL		Voltage	Ballast	Mounting	
Series	Wattage	Distribution				Type	Size ¹²
KVF2	Metal halide	High pressure sodium³	Vertical lamp:⁷	120	(blank) Magnetic ballast	SP__ Square pole	06 6" arm
	175M ¹	250S	SYM__ Symmetric square	208 ⁹	CWI Constant wattage isolated	RP__ Round pole	09 9" arm
	200M ²	400S	ASY__ Asymmetric	240 ⁹		WB__ Wall bracket	12 12" arm
	250M ³	750S	VFA Vertical forward throw automotive	277		SCWA Super CWA ballast	WW__ Wood pole or wall bracket
	320M ²	1000S ⁴	Horizontal lamp:⁷	347	Note: For shipments to U.S. territories, SCWA must be specified to comply with EISA.	PT__ Post top; opentop pole	4 4" OD
	350M ^{1,2}		R2__ Type II	480 ⁹			4.5 4.5" OD
	400M ³		R3__ Type III	TB ¹⁰			5 5" OD
	450M ^{1,2}			23050HZ ¹¹			6 6" OD
	1000M⁴						

Options			Finish ¹⁹	Lamp ²⁰
Shipped installed in fixture			(blank) Dark bronze	LPI Lamp included
SF	Single fuse 120, 277, 347V ¹³	EHS External houseside shield black (matches fixture finish) ^{16, 17, 18}	DBL Black	L/LP Less lamp
DF	Double fuse 208, 240, 480V ¹³	EHSB External houseside shield black (painted black to maximize light control) ^{16, 18}	DGC Charcoal gray	
KW1	KiloWatch® 120V control relay ^{13, 14}	CSA Listed and labeled to comply with Canadian Standards	DMB Medium bronze	
KW4	KiloWatch® 277V control relay ^{13, 14}	NOM NOM certified ¹¹	DNA Natural aluminum	
PER	NEMA twist-lock receptacle only (photocontrol not included)	INTL Available for 175M probe start shipping outside the U.S.	DWH White	
QRS	Quartz restrike system ¹⁵	REGC1 California Title 20 effective 1/1/2010	CR Corrosion resistant	
QRSTD	QRS time delay ^{11, 15}			
EA	Embossed accent			

Accessories: Tenon Mounting Slipfitter ²¹ Order as separate catalog number.							
Tenon O.D.	One	Two@180°	Two@90°	Three@120°	Three@90°	Four@90°	
2-3/8 (6.0)	T20-190	T20-280	T20-290	T20-320	T20-390	T20-490	
2-7/8 (7.3)	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490	
4 (10.2)	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490	

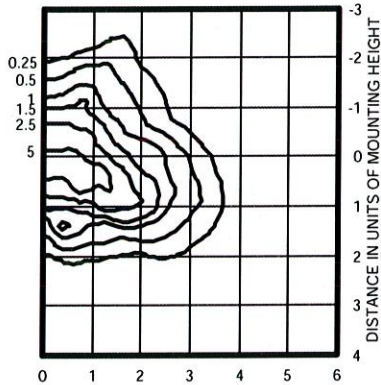
Notes

- These wattages do not comply with California Title 20 regulations.
- Must be ordered with SCWA.
- These wattages require the REGC1 option to be chosen for shipments into California for Title 20 compliance. 250M REGC1 not available in 347 or 480V.
- Use reduced jacketed lamp.
- Not available with SCWA.
- Available in ASYDL, SYMDL or VFADL. Standard ED25 lamp.
- For drop lens, specify DL. For flat lens, specify FL. Example: SYMDL or R2FL.
- Not available with 1000W or post top.
- Must specify CWI for use in Canada.
- Optional multi-tap ballast (120, 208, 240, 277V; 120, 277, 347V in Canada).
- Consult factory for available wattages.
- 12" arm required when two or more luminaires are oriented on a 90° drilling pattern.
- Not available with TB. Must specify voltage.
- Available in vertical lamp orientation only for 200-400M SCWA. Any orientation on 250S or 400S only.
- Maximum allowable wattage lamp included.
- May be ordered as an accessory.
- Specify finish when ordered as an accessory.
- Prefix with KVF2 when ordering as an accessory. Use KVF2EHSFL__ for high-performance reflectors.
- See www.lithonia.com/archcolors for additional color options.
- Must be specified.
- Arm mount only.

KVF2 Arm-Mounted Area Lighting

KVF2 250M SR2FL TEST NO: LTL11250P

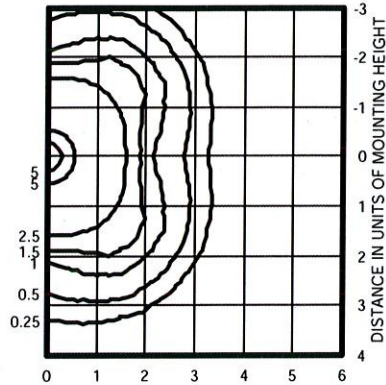
ISOILLUMINANCE PLOT (Footcandle)



250W pulse start metal halide lamp, rated 22500 lumens. Footcandle values based on 20' mounting height.
Classification: Type II, Short, Full Cutoff

KVF2 400M SYMFL TEST NO: LTL9432P

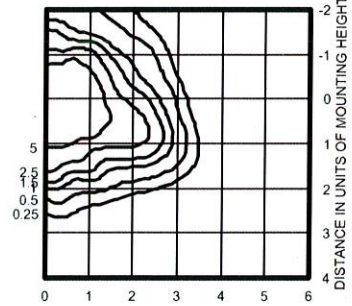
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 42000 lumens. Footcandle values based on 20' mounting height.
Classification: Type IV, Short, Full Cutoff

KVF2 400S R3FL TEST NO: LTL11324

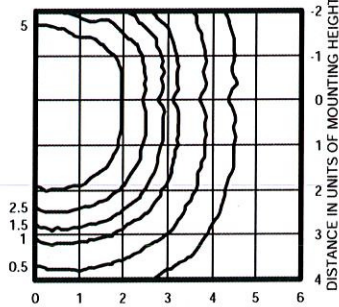
ISOILLUMINANCE PLOT (Footcandle)



400W lamp, rated 50000 lumens. Footcandle values based on 20' mounting height.
Classification: Type II, Medium, Full Cutoff

KVF2 1000M ASYDL TEST NO: LTL11381

ISOILLUMINANCE PLOT (Footcandle)



1000W lamp, rated 110000 lumens. Footcandle values based on 20' mounting height.
Classification: Type IV, Short, Cutoff

Mounting Height Correction Factor

(Multiply the fc level by the correction factor)

25 ft.= 0.64

30 ft.= 0.45

40 ft.= 0.25

$$\left(\frac{\text{Existing Mounting Height}}{\text{New Mounting Height}} \right)^2 = \text{Correction factor}$$

Notes

- 1 Photometric data for other distributions can be accessed from the Lithonia Lighting Web site (www.lithonia.com)
- 2 For electrical characteristics, consult outdoor technical data specification sheets on www.lithonia.com.
- 3 Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory and actual field measurements. Dimensions and specifications are based on the most current available data and are subject to change.



FEATURES & SPECIFICATIONS

INTENDED USE — For building- and wall-mounted applications.

CONSTRUCTION — Rugged, die-cast, single-piece aluminum housing. Die-cast door frame has a 1/8" thick tempered glass lens. Door frame is fully gasketed with one-piece solid silicone.

OPTICS — Segmented reflectors for superior uniformity and control. Reflectors are interchangeable. Three full cutoff distributions available: FT (forward throw), MD (medium throw) and WT (wide throw).

ELECTRICAL — Ballast: 50W-150W utilizes a high reactance, high power factor ballast. Metal halide 150W and below are standard with pulse-start technology. 35S utilizes a reactance high power factor ballast. 175W utilizes a constant-wattage autotransformer ballast. CSA, NOM or INTL required for probe start shipments outside of the US for 175M. Not available 175M SCWA. Ceramic metal halide lamps are recommended for use in applications where superior color rendition, lumen maintenance and longer lamp life are desired.

Quick disconnect plug easily disconnects reflector from ballast. Ballasts are 100% factory-tested.

Socket: Porcelain, medium-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 660W, 600V 4KV pulse rated.

Finish: Standard finish is textured dark bronze (DDBT) corrosion-resistant polyester powder finish. Additional architectural colors are available. Striping is also available.

INSTALLATION — Universal mounting mechanism with integral mounting support allows fixture to hinge down. Bubble level provides correct alignment with each installation.

LISTINGS — UL Listed (standard). CSA Certified (see Options). Suitable for wet locations (damp location listed in lens-up orientation). WLU option offers wet location listing in up orientation (see Options). IP65 rated. 25°C ambient. ELED: U.S. Patent No. 7,737,640.

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type



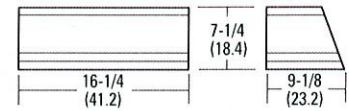
Decorative Wall-Mounted Lighting

WST

METAL HALIDE: 50W-175W
HIGH PRESSURE SODIUM: 35W-150W

Specifications

Length: 16-1/4 (41.2)
Depth: 9-1/8 (23.2)
Overall Height: 7-1/4 (18.4)
*Weight: 30 lbs (13.6 kg)



All dimensions are inches (centimeters) unless otherwise indicated.
*Weight as configured in example below.

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: WST 100M FT TB LPI

WST Series	Wattage/source	MD Distribution	Voltage	Ballast	Mounting	Options
WST	High pressure sodium	Ceramic metal halide	120	(blank) Magnetic ballast	(blank) Surface mount	Shipped installed in fixture
	35S ¹	50M	208 ³	CWI Constant wattage isolated	Shipped separately ⁷	SF Single fuse (120, 277, 347W) ⁸
	50S	70M	240 ⁹	Pulse Start SCWA Super CSA pulse start ballast ⁵	BBW Surface mount back box	DF Double fuse (208, 240V) ⁸
	70S	100M	277		UT5 Uplift 5 degrees	DC12 Emergency circuit 12-volt (35W lamp included) ⁹
	100S	150M	347			2DC12 Emergency circuit 12-volt (two 35W lamps included) ⁹
	150S	175M ²	150MHC	TB ⁴		DC2012 Emergency circuit 12-volt (20W lamp included) ⁹
			23050HZ ⁵			2DC2012 Emergency circuit 12-volt (two 20W lamps included) ⁹

Options (continued)				Finish ¹⁶	Lamp ¹⁸	
ELED	Emergency LED secondary source battery pack with time delay (-4°F min. operating temperature) ¹⁰	QRS	Quartz restrrike system ^{11, 15}	Shipped separately ¹⁴	(blank) Dark bronze, textured	LPI Lamp included
2ELED	Emergency LED secondary source (two modules) battery pack with time delay (-4°F min. operating temperature) ¹⁰	WLU	Wet location door for up orientation	WG Wire guard	DSST Sandstone, textured	L/LP Less lamp
DFL	Diffusing lens	CSA	CSA certified	VG Vandal guard	DNAT Natural aluminum, textured	
EC	Emergency circuit ^{11, 12}	NOM	NOM certified ⁵		DWHG White, textured	
IBS	Internal backlight shield ¹³	INTL	International shipment for 175M		DBLB Black, textured	
PE	Photoelectric cell-button type (n/a TB) ¹⁴				CR Corrosion-resistance	
					CRT Non-stick protective coating ¹⁷	

Notes

- 120V.
- These wattages do not comply with California Title 20 regulations.
- Must specify CWI for use in Canada.
- Optional multi-tap ballast (120, 208, 240, 277V); (120, 277, 347V in Canada; ships as 120V/347V).
- Consult factory for available wattages.
- Available with 150M or 150MHC only.
- May be ordered as an accessory with prefix "WS". Must specify finish.
- Not available with DC options.
- Not available with ELED, SF, DF, EC or QRS.
- Maximum wattage 100M, 70S. Must specify 120V or 277V. Not available with QRS, EC or DC.
- Maximum allowable wattage lamp included.
- Not available with ELED, QRS or DCs.

- Not available with medium throw (MD, MDU, MDUS) distributions.
- Must be ordered with fixture; cannot be field installed.
- Not available with ELED, EC or DCs.
- See www.lithonia.com/archcolors for additional color options.
- Black finish only.
- Must be specified. L/LP not available with MHC.

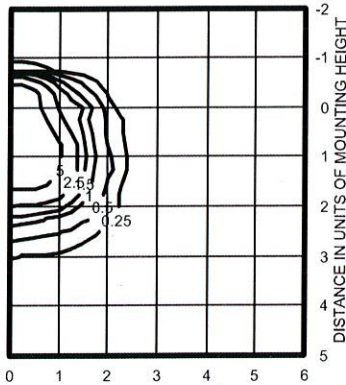


Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction

WST Metal Halide, High Pressure Sodium Wall Mounted

WST 150MHC FT LTL11069P

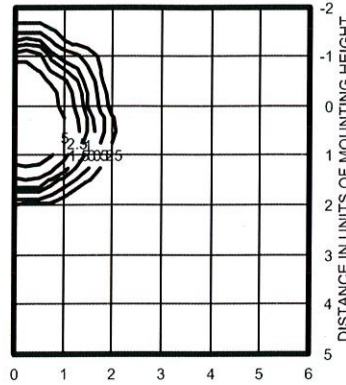
ISOILLUMINANCE PLOT (Footcandle)



150W pulse start metal halide lamp, horizontal lamp orientation Footcandle values based on 12' mounting height, 14000 rated lumens.
Luminaire Efficiency: 52.9%

WST 150MHC MD LTL11068P

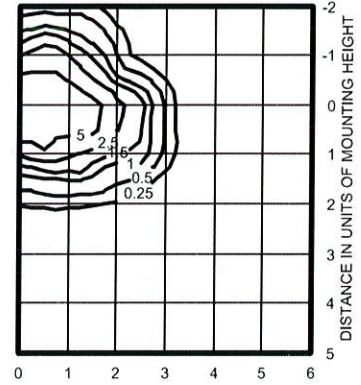
ISOILLUMINANCE PLOT (Footcandle)



150W pulse start metal halide lamp, horizontal lamp orientation Footcandle values based on 12' mounting height, 12500 rated lumens.
Luminaire Efficiency: 60.2%

WST 150MHC WT LTL11070P

ISOILLUMINANCE PLOT (Footcandle)



150W pulse start metal halide lamp, horizontal lamp orientation Footcandle values based on 12' mounting height, 14000 rated lumens.
Luminaire Efficiency: 62.5%

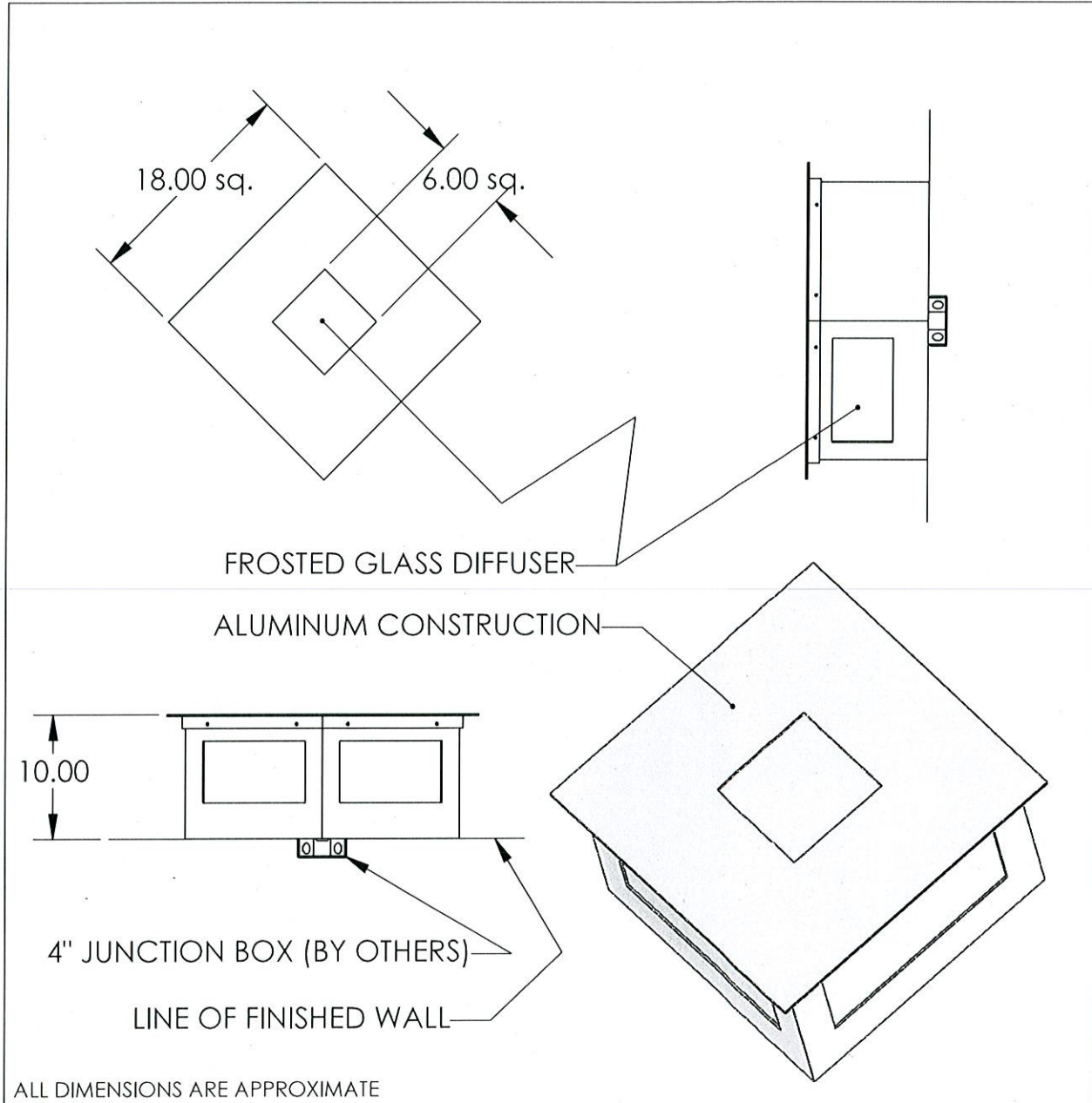
Lamp	Initial lumens	Mounting height			
		10'	12'	14'	16'
Metal Halide					
50W MH	3,900	0.43	0.30	0.22	0.17
70W MH	5,500	0.62	0.43	0.31	0.24
100W MH	8,500	0.95	0.66	0.48	0.37
150W MH	12,500	1.41	0.98	0.72	0.55
175W MH	12,800	1.44	1.0	0.73	0.56
High Pressure Sodium					
35W HPS	1,250	0.26	0.18	0.13	0.10
50W HPS	4,000	0.45	0.31	0.23	0.17
70W HPS	6,400	0.72	0.50	0.37	0.28
100W HPS	9,500	1.07	0.74	0.54	0.41
150W HPS	16,000	1.80	1.25	0.91	0.70

Emergency Option Lamp Compatibility							
Lamp options	DC12	2DC12	DC2012	2DC2012	EC	ELED	2ELED
# of lamps/wattage							
35S	■	■	■	■	■	■	■
50S	■	■	■	■	■	■	■
70S	■	■	■	■	■	■	■
100S	■	■	■	■	■		
150S	■	■	■	■	■		
50M	■	■	■	■	■	■	■
70M	■	■	■	■	■	■	■
100M	■	■	■	■	■	■	■
150M	■	■	■	■	■		
175M	■	■	■	■	■		

2009

TMS LIGHTING - LUMINAIRE APPROVAL DRAWING
Q17088 CUSTOM WALL SCNCE

TYPE:
REV.4



ALL DIMENSIONS ARE APPROXIMATE

GENERAL SPECIFICATIONS

- Body Assy: Aluminum Construction
- Finish: F31 Silver Metallic
- Diffuser: Frosted Glass
- Lampholder: Medium Base
- Ballast: Integral Electronic HPF 120/277V
- Lamps: 1x70W MH (Supplied)
- Mounting: Wall

Fixture for Outdoor Application

PROPRIETARY & CONFIDENTIAL

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