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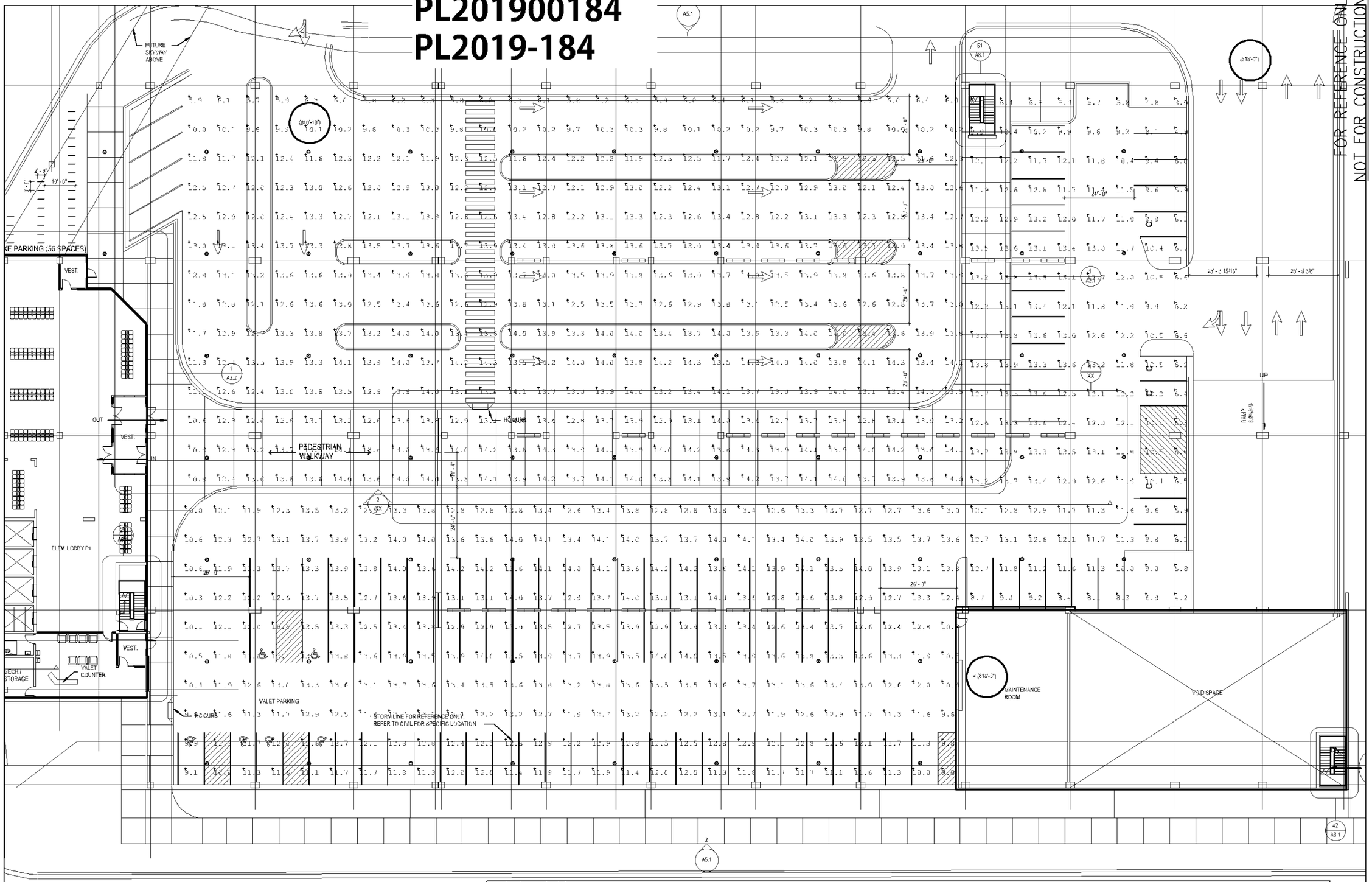
PL2019-184



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	68	VCHG LED P7 50K TFN UVOLT	SINGLE	N.A.	1.000	VCHG LED P7 50K TFN UVOLT

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
P1 PARKING	Illuminance	FC	2.23	14.2	3.0	2.63	4.73
P1 TRANSIT	Illuminance	FC	2.52	14.3	5.7	2.20	2.51

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Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P1 LIGHTING

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL1.1

Date: 10/02/2019

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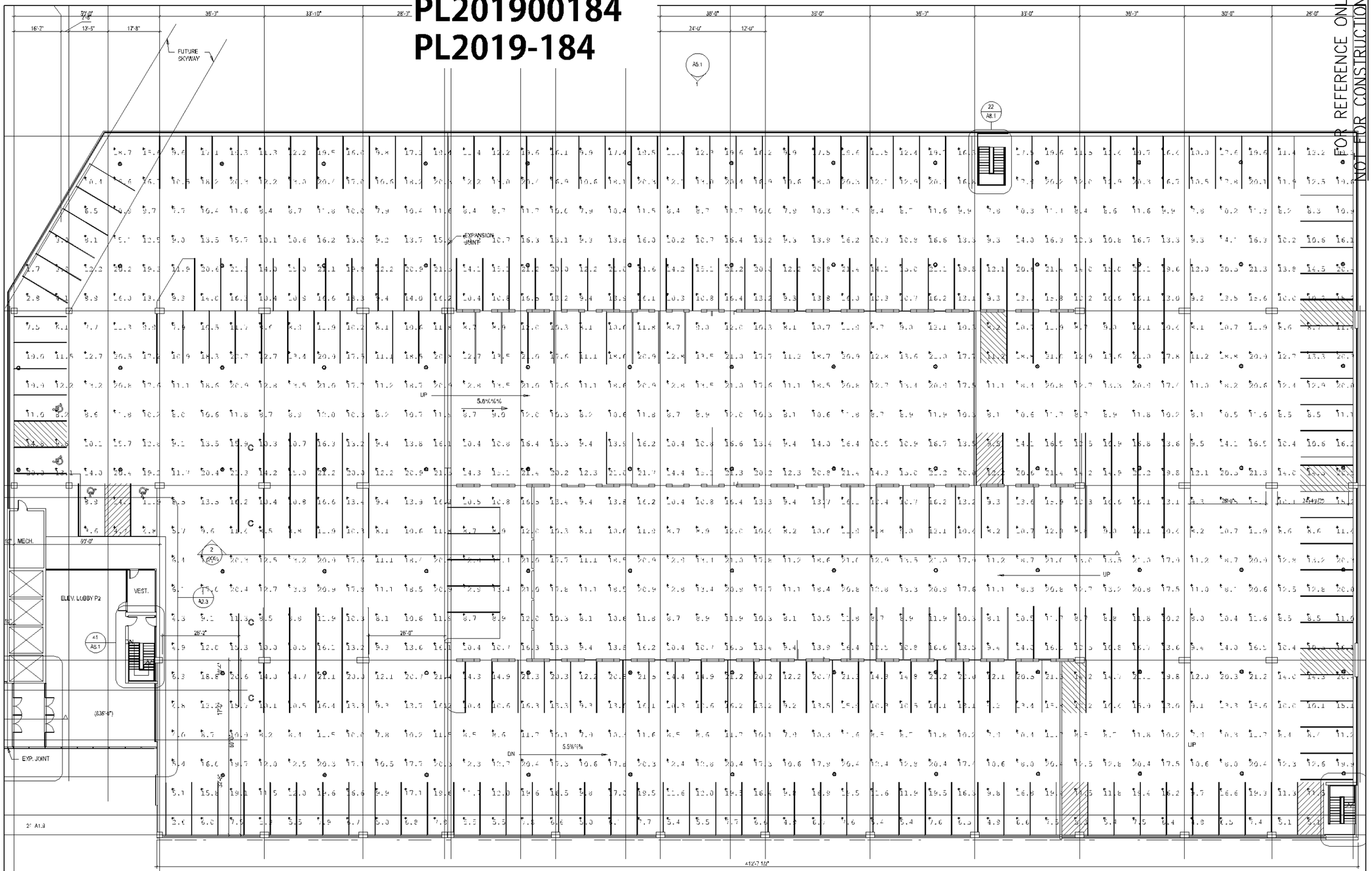

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Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	90	VCPG LED P7 50K T5M MVOLT	SINGLE	N/A	1.000	VCPG LED P7 50K T5M MVOLT

Calculation Summary

Label	Calculation Type	Units	Avg	Max	Min	Avg/Min	Max/Min
P2 PARKING	Illuminance	Fc	13.34	21.7	1.7	7.85	12.76

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Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P2 LIGHTING

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL1.2

Date: 10/02/2019

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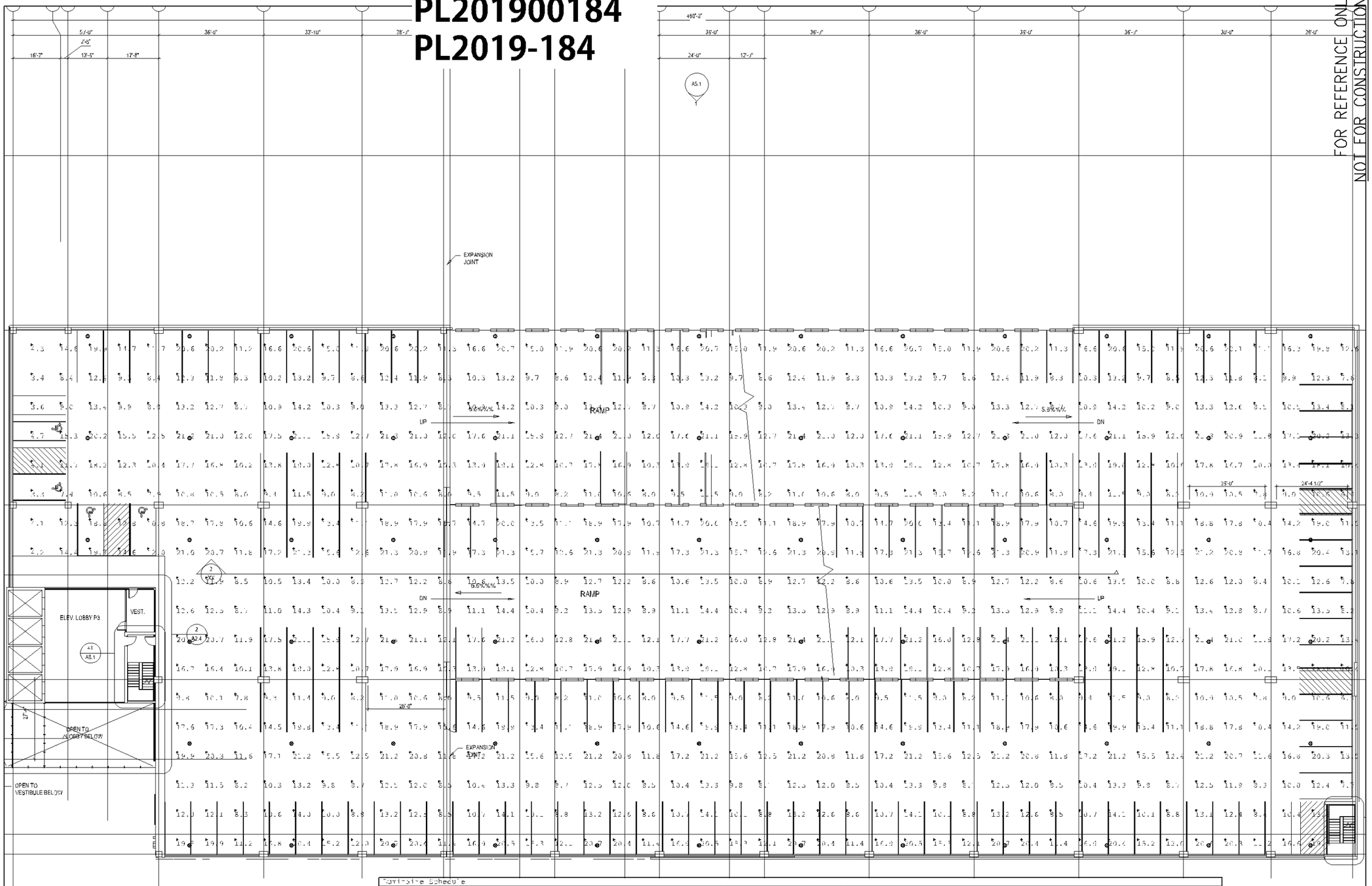

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	75	VGHG LED P7 50K TSM MVOLT	SINGLE	N.A.	1.000	VGHG LED P7 50K TSM MVOLT

Calculation Summary							
Label	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
P3-4 PARKING	Illuminance	Fc	13.58	21.7	3.3	4.12	6.76

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Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P3-4 LIGHTING

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL1.3

Date: 10/02/2019

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Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	34	DSZ0_LED_P7_50X_T5M_MVOLT	SINGLE	N.A.	1.000	DSX0 LED P7 50X T5M MVOLT

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
P8 PARKING	Illuminance	Fc	8.88	16.0	2.0	4.44	8.00

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Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P8 LIGHTING

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL1.8

Date: 10/02/2019

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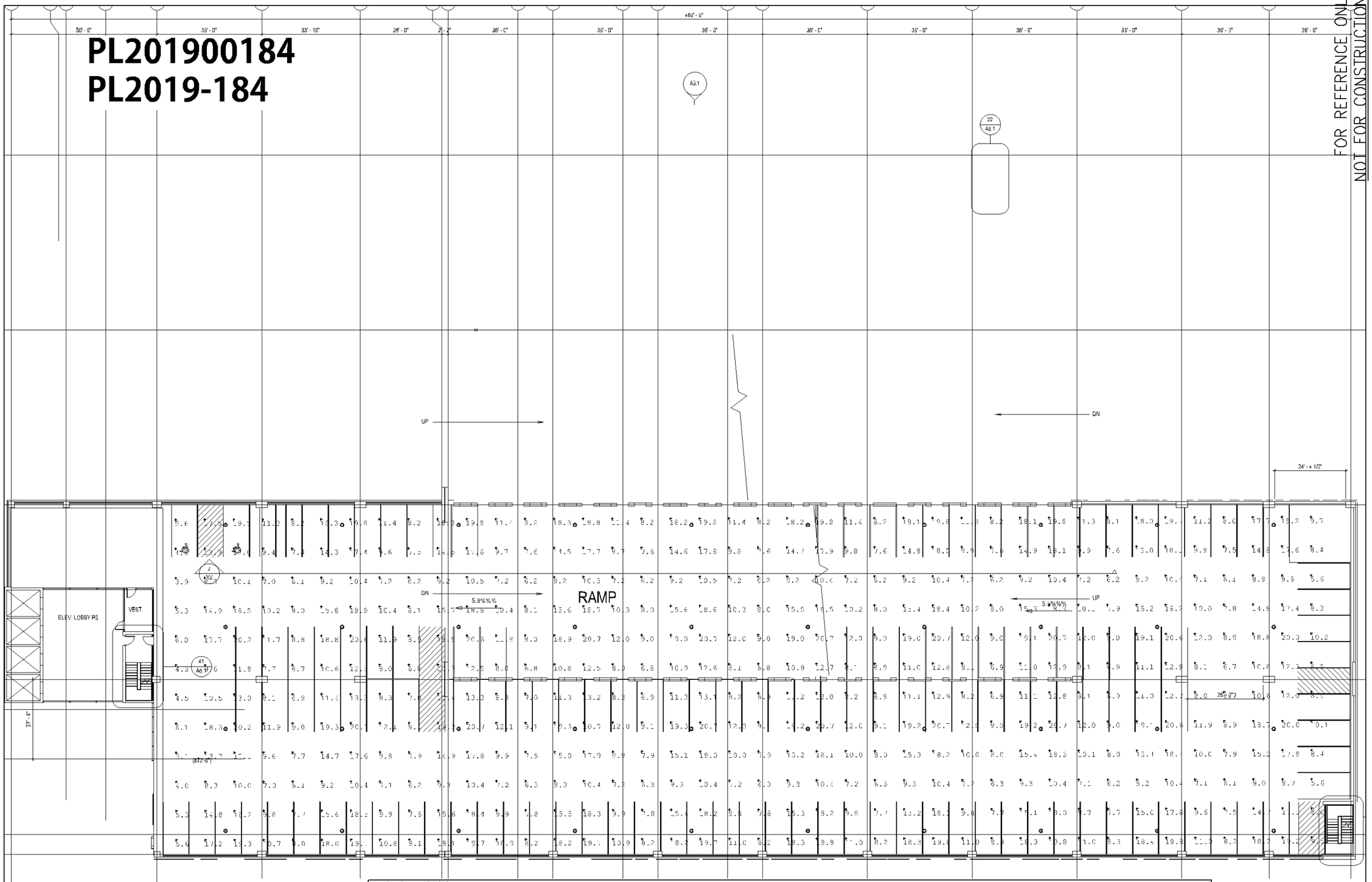

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	40	VCPG LED P7 50K TSM MVOLT	SINGLE	N.A.	1.000	VCPG LED P7 50K TSM MVOLT

Calculation Summary							
Label	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
P5-7 PARKING	Illuminance	Fc	12.00	20.7	3.9	3.08	5.31

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Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P5-7 LIGHTING

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL1.5

Date: 10/02/2019

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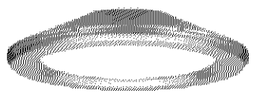


VCPG LED
Parking Garage

Catalog Number: VCPG LED P7 50K T5M MVOLT

Notes:

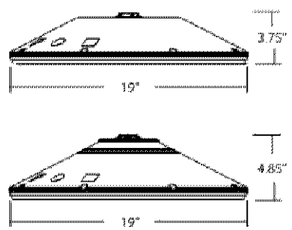
Type: P1

Specifications

Diameter: 19"

Height: 3.75" (4.85" with 6" up)

Weight (max, with no options): 18 lbs



Introduction

The all new VCPG LED (Visually Comfortable Parking Garage) luminaire is designed to bring glare control, optical performance and energy savings into one package. The recessed lens design of VCPG LED minimizes high angle glare, while its precision molded acrylic lens eliminates LED pixilation and delivers the required minimums, vertical's and uniformity. The dedicated up-light module option reduces the contrast between the luminaire and the ceiling creating a more visually comfortable environment.

The VCPG LED delivers up to 87% in energy savings when replacing 175W metal halide luminaires. With over 100,000 hour life expectancy (12+ years of 24/7 continuous operation), the VCPG LED luminaire provides significant maintenance savings over traditional luminaires.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: VCPG LED V4 P4 40K 70CRI T5M MVOLT SRM DNAXD

VCPG LED

Series	LED Light Engines	Package	Color Temperature	Color Rendering Index	Distribution	Voltage	Mounting
VCPG LED	V4[1] 4 - light Engines V8[1] 8 - light Engines	P1 P2 P3 P4 P5 P6 P7	30K 3000 K 35K 3500 K 40K 4000 K 50K 5000 K	70CRI 80CRI	T5M Type V medium T5R[2] Type V w/ refractor T5W Type V wide T5E Type V easy LAM[2] Linear lens	MVOLT[3] 347 480	For ordering with fuse 120 208 240 277 347 480

Shipped included
PM Pole or wall mount standard (24-inch length wiring leads)[4]
SHM Surface mount (24-inch length wiring leads)[4]

Shipped separately
VK Yoke mounting mount[4]

Options

Shipped installed
UPL1 Up Light - 500 lumens
UPL2 Up Light - 1000 lumens
ERWC Emergency battery backup, Certified in CA Title 20 MAEDBS (8W, 25% rated lumens)[5,6]
ETDWH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5% rated lumens)[5,6]
HA High ambient (50°C, non-PF PIR)
SF Single fuse (120, 277, 347V)
DF Double fuse (208, 240, 480V)
SPD10KV 10kV Surge Pack
LD536 36.0 in. - 914.4mm length
LD572 72.0 in. - 1828.8mm length
LD5108 108.0 in. - 2743.2mm length
DMG 0-10V dimming (5-10V ready, recommended)[7]

Shipped Separately
WG Wire guard
BDS Bird Shroud
HS House Side Shield

Standalone Sensors/Controls[8]
PIR Motion/ambient sensor for 8-15' mounting heights
PIRH Motion/ambient sensor for 15-30' mounting heights
PIR3FC3V Motion/ambient sensor for 8-15' mounting heights, pre-programmed to 3fc and 35% light output
PIRH3FC3V Motion/ambient sensor for 15-30' mounting heights, pre-programmed to 3fc and 35% light output
PIR3FC3V924 UL 924 listed motion/ambient sensor for emergency circuit for 8-15' mounting heights, pre-programmed to 3fc and 35% light output[9]
PIRH3FC3V924 UL 924 listed motion/ambient sensor for emergency circuit for 15-30' mounting heights, pre-programmed to 3fc and 35% light output[9]

Networked Sensors/Controls[8]
NLTAIR2 PIR nLIGHT AIR Wireless enabled motion/ambient sensor for 8-15' mounting heights
NLTAIR2 PIRH nLIGHT AIR Wireless enabled motion/ambient sensor for 15-30' mounting heights
XAD XPoint™ Wireless-enabled[10]
XAD924 XPoint™ Wireless-enabled, UL 924 listed for emergency circuit[10,9]
XAD PIR XPoint™ Wireless-enabled motion/ambient sensor for 8-15' mounting heights[10]
XAD PIRH XPoint™ Wireless-enabled motion/ambient sensor for 15-30' mounting heights[10]
XAD924PIR XPoint™ Wireless-enabled, UL 924 listed motion/ambient sensor for emergency circuits for 8-15' mounting heights[10,9]
XAD924PIRH XPoint™ Wireless-enabled, UL 924 listed motion/ambient sensor for emergency circuits for 15-30' mounting heights[10,9]

Finish
DWHXD White
DNAXD Natural aluminum
DDBXD Dark bronze
DBLXD Black

LITHONIA LIGHTING
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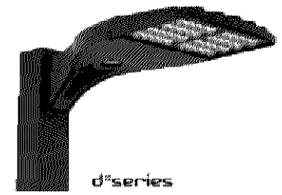
VCPG LED
Rev. 08/22/19



D-Series Size 0
LED Area Luminaire

Catalog Number: DSX0 LED P7 50K T5M MVOLT

Notes:

Type: P2A, P2B

Specifications

EPA: 0.95 ft² (0.09 m²)

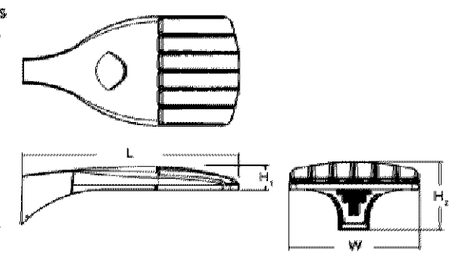
Length: 26" (66.0 cm)

Width: 13" (33.0 cm)

Height$_1$: 3" (7.6 cm)

Height$_2$: 7" (17.8 cm)

Weight (max): 16 lbs (7.3 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series	LED	Color Temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** P1 P4 P7 P2 P5 P3 P6 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5VW Type V wide BLC Backlight control LCCO Left corner cutoff RCCO Right corner cutoff	MVOLT[2,3] 120[3] 208[3] 240[3] 277[3] 347[3,4] 480[3,4]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adapter[5] RPUMBA Round pole universal mounting adapter[5] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adapter (specify finish)[6]

Control Options

Shipped installed
NLTAIR2 nLight AIR generation 2 enabled[7,8]
PIRHN Bi-network, high/low motion/ambient sensor[8,9]
PER NEMA twist-lock receptacle only (control ordered separately)[10]
PER5 Five-pin receptacle only (control ordered separately)[10,11]
PER7 Seven-pin receptacle only (for use with fusing) (control ordered separately)[10,12]
DMG 0-10V dimming wires extended out back of housing for external control (control ordered separately)[13]

PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 3fc[9,14]
PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 3fc[9,14]
PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[9,14]
PIRH1FC3V High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[9,14]
FAO Field adjustable output[15]

Other Options

Shipped installed
HS House side shield
SF Single fuse (120, 277, 347V)[3]
DF Double fuse (208, 240, 480V)[3]
L90 Left rotated optics[1]
R90 Right rotated optics[1]
DBL Differed duplex[16]

Shipped separately
BS Bird spikes[17]
EGS External glare shield[17]

Finish
DDBXD Dark bronze
DBLXD Black
DNAXD Natural aluminum
DWHXD White
DDBTXD Textured dark bronze
DBLBXD Textured black
DNATXD Textured natural aluminum
DWHGXD Textured white

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COMMERCIAL OUTDOOR
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DSX0 LED
Rev. 09/12/19
Page 1 of 8

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Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: LIGHTING CUTSHEETS

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL2.1

Date: 10/02/2019

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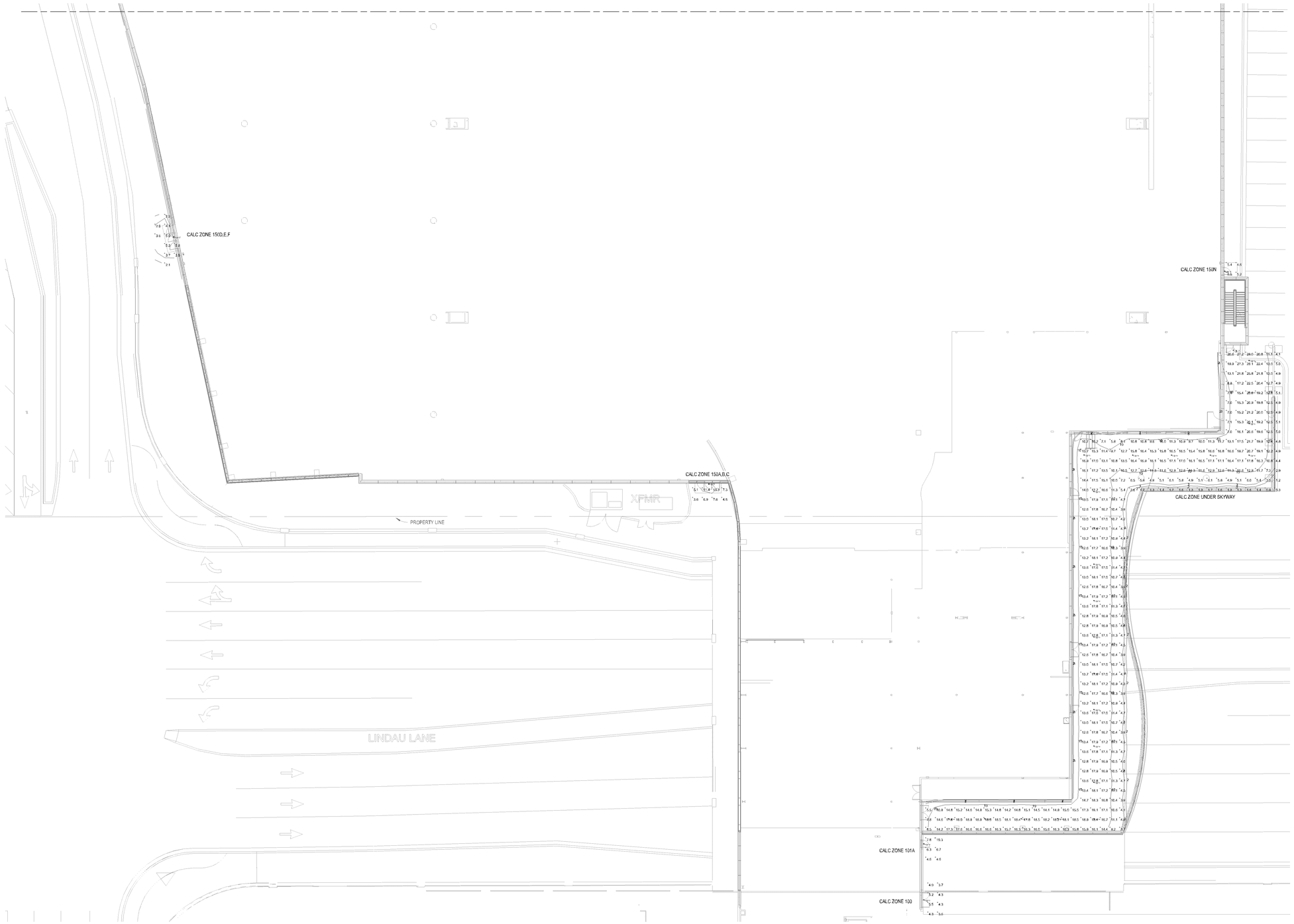

1 PHOTOMETRICS SITE PLAN - INITIAL AT-GRADE - AREA A
1/16" = 1'-0"

Statistics - Area A						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 100	+	4.4 fc	5.5 fc	3.6 fc	1.5:1	1.2:1
Calc Zone 101A	+	6.7 fc	10.3 fc	4.6 fc	2.2:1	1.5:1
Calc Zone 150A,B,C	+	7.5 fc	13.3 fc	3.6 fc	3.7:1	2.1:1
Calc Zone 150D,E,F	+	3.9 fc	5.8 fc	2.1 fc	2.8:1	1.9:1
Calc Zone 150N	+	5.4 fc	6.5 fc	4.6 fc	1.4:1	1.2:1
Calc Zone Under Skyway	+	12.8 fc	28.1 fc	0.3 fc	93.7:1	42.7:1

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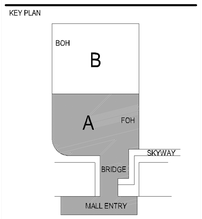
SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



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REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

PHOTOMETRIC SITE PLAN - INITIAL AT-GRADE - AREA A

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.1A

PL201900184
PL2019-184

1 PHOTOMETRICS SITE PLAN - INITIAL AT-GRADE - AREA B
1/16" = 1'-0"

Statistics - Area B						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 150G,H,I	+	3.9 fc	5.8 fc	2.1 fc	2.8:1	1.9:1
Calc Zone 150K	+	4.7 fc	6.0 fc	3.8 fc	1.6:1	1.2:1
Calc Zone 150L	+	4.7 fc	6.0 fc	3.8 fc	1.6:1	1.2:1
Calc Zone 150M	+	5.2 fc	6.4 fc	4.3 fc	1.5:1	1.2:1
Calc Zone 161,165A	+	7.8 fc	13.5 fc	4.0 fc	3.4:1	2.0:1
Calc Zone S2A	+	8.8 fc	14.2 fc	4.5 fc	3.2:1	2.0:1
Loading Dock	+	5.5 fc	7.9 fc	2.3 fc	3.4:1	2.4:1
Loading Dock Roof	+	1.4 fc	6.1 fc	0.1 fc	61.0:1	14.0:1
Utility	+	7.1 fc	12.4 fc	2.7 fc	4.6:1	2.6:1

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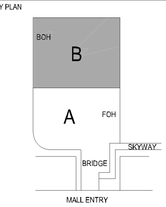
KEY PLAN



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NO.	REVISION	DATE

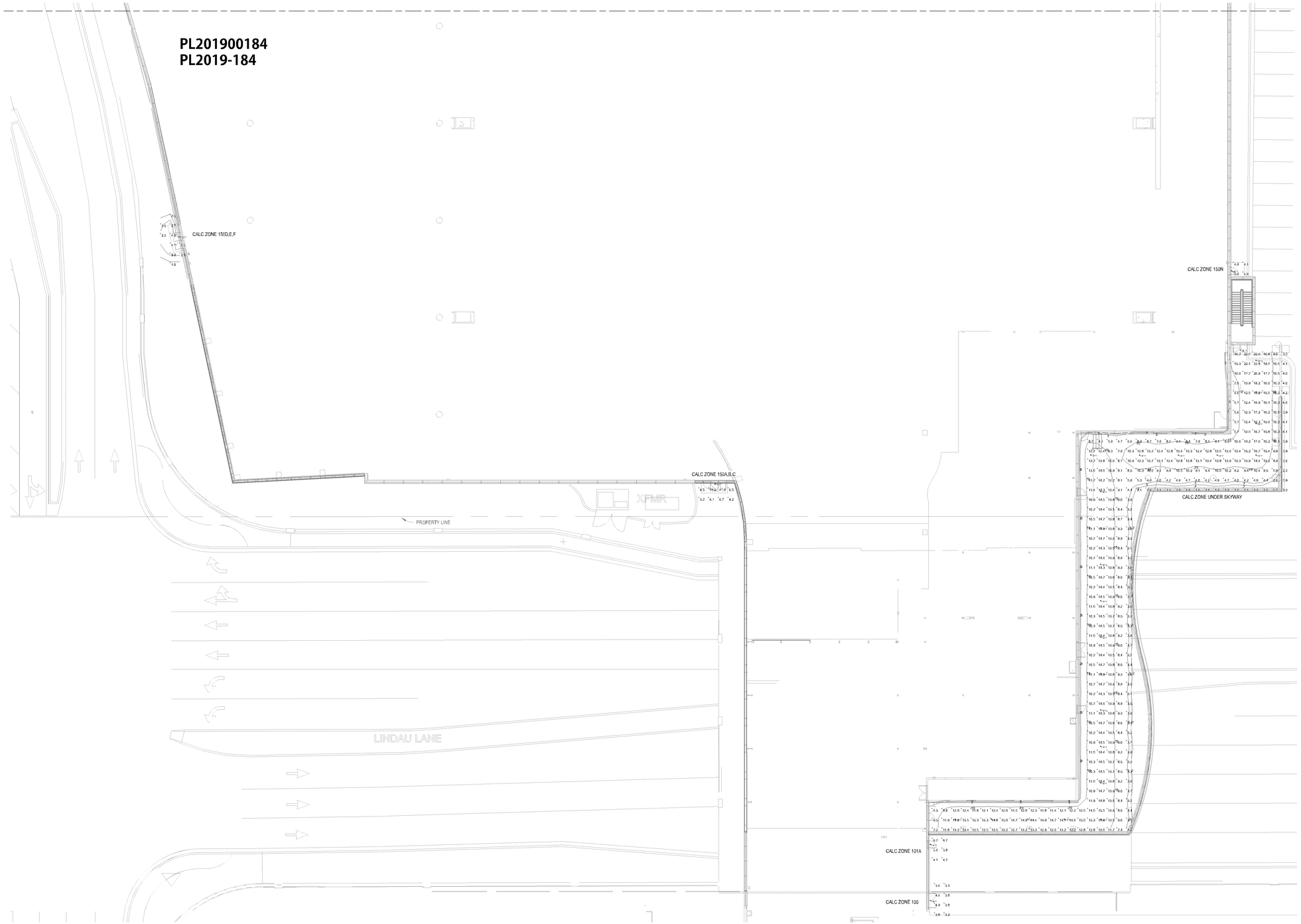
SHEET NAME

PHOTOMETRIC SITE PLAN - INITIAL AT-GRADE - AREA B

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.1B



1 PHOTOMETRICS SITE PLAN - MAINTAINED AT-GRADE - AREA A
1/16" = 1'-0"

Statistics - Area A						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 100	+	3.9 fc	4.9 fc	3.2 fc	1.5:1	1.2:1
Calc Zone 101A	+	5.8 fc	8.7 fc	4.1 fc	2.1:1	1.4:1
Calc Zone 150A,B,C	+	6.6 fc	11.8 fc	3.2 fc	3.7:1	2.1:1
Calc Zone 150D,E,F	+	3.5 fc	5.2 fc	1.9 fc	2.7:1	1.8:1
Calc Zone 150N	+	4.8 fc	5.8 fc	4.1 fc	1.4:1	1.2:1
Calc Zone Under Skyway	+	10.4 fc	22.8 fc	0.3 fc	76.0:1	34.7:1

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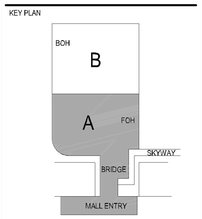
SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



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REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

PHOTOMETRIC SITE PLAN - MAINTAINED AT-GRADE - AREA A

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
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SCALE:	As indicated

SHEET NUMBER

ES1.2A

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PL2019-184

1 PHOTOMETRICS SITE PLAN - MAINTAINED AT-GRADE - AREA B
1/16" = 1'-0"

Statistics - Area B						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 150G,H,I	+	3.5 fc	5.1 fc	1.9 fc	2.7:1	1.8:1
Calc Zone 150K	+	4.2 fc	5.4 fc	3.3 fc	1.6:1	1.3:1
Calc Zone 150L	+	4.2 fc	5.4 fc	3.3 fc	1.6:1	1.3:1
Calc Zone 150M	+	4.6 fc	5.7 fc	3.8 fc	1.5:1	1.2:1
Calc Zone 161,165A	+	6.9 fc	12.0 fc	3.6 fc	3.3:1	1.9:1
Calc Zone S2A	+	7.8 fc	12.6 fc	4.0 fc	3.2:1	2.0:1
Loading Dock	+	4.9 fc	7.0 fc	2.0 fc	3.5:1	2.5:1
Loading Dock Roof	+	1.3 fc	5.4 fc	0.1 fc	54.0:1	13.0:1
Utility	+	6.3 fc	11.0 fc	2.4 fc	4.6:1	2.6:1

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Electric Corporation

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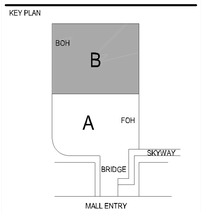
SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

PLAN NORTH TRUE NORTH

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DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

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REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

PHOTOMETRIC SITE PLAN - MAINTAINED AT-GRADE - AREA B

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.2B

PL201900184
PL2019-184

Lumark

Catalog #	XTOR2B
Project	SOUTH LOOP WATERPARK
Comments	
Prepared by	
Type	A
Date	10/02/19

DESCRIPTION

The patented Lumark Crosstour - LED Wall Pack Series of luminaires provides an architectural style solution for high, energy efficient LEDs. The low profile, rugged, die-cast aluminum construction, universal back box and hinged door with stainless steel hardware allow easy access to the compartment make the Crosstour maintenance friendly. The Crosstour wall luminaire is ideal for walkways, inverted mount for facade/canopy illumination, perimeter and landscape illumination, parking areas, storage facilities, industrial facilities, schools and loading docks.

SPECIFICATION FEATURES

Construction
Low-profile, LED designs with rugged, die-cast aluminum construction. Back box and hinged removable door. Matching housing styles incorporate both a small and a medium footprint. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 26W model. Potential secure lock hinge feature allows for safe and easy door access. Fixtures are available in 120V, 277V and 347V. The medium housing is available in the 26W model. Potential secure lock hinge feature allows for safe and easy door access. Fixtures are available in 120V, 277V and 347V. Fixtures are UL listed for wet locations. Fixtures are electrically connectable with the supplied push-in connectors. Back box includes three knock-out, 1/2" threaded conduit entry points. The small housing can be mounted to the small and medium terra pole mounts to standard 2-1/2" to 4" round and octagonal, 4" square, single gang and mounting junction boxes. The medium housing can be mounted to standard 2-1/2" to 4" round and octagonal, 4" square, single gang and mounting junction boxes. Mounting hardware is included for adjustable installation on a wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 9" entry hole for site lighting applications. Fixtures are rated for cut-wash applications.

Optical
Patented or patent-pending LED aluminum housing incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly is sealed from the environment for long-term performance. Fixtures are IP65 rated. Fixtures are IK08 rated. Optional electrical wiring compartment integral LED electronics driver incorporates surge protection - 10kV/5kA in 2kV/1kA in 120V models.

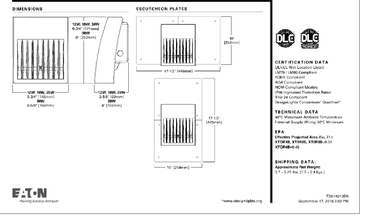
Finish
Housing is protected with a 2-coat durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand severe climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

XTOR
CROSSTOUR LED

APPLICATIONS
WALL / SURFACE
INVERTED
POST TOP
SITE LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



CERTIFICATION DATA

UL/cUL Wet Location Listed
CSA - LR48 Compliant
IP65 Ingress Rating
RoHS Compliant
NOM Compliant Models
IK08 Impact Resistance Rated
Title 24 Compliant
Designed to Comissioner "Qualified"

TECHNICAL DATA

40°C Maximum Ambient Temperature
Rated at Supply Wiring 90°C Minimum

EPA

Crosstour Projected Area (ft.²):
XTOR2B, XTOR2B, XTOR6BRL:
.4 ft.² (.037 m²)

SHIPPING DATA

Approximate Net Weight:
3.7 - 5.25 lbs. (1.7 - 2.4 kgs.)

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page 2 — **XTOR** CROSSTOUR LED

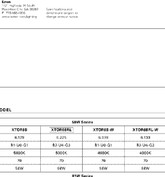
POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR2B	XTOR2B-W	XTOR6-P	XTOR2E	XTOR6-W	XTOR2S-P	XTOR2B	XTOR2S-W	XTOR6B-P	XTOR6-P	XTOR6BRL-P
Delivered Lumens (Watt Mission)	1,418	1,396	1,337	2,038	2,102	1,897	2,751	2,710	2,878	4,260	4,235	3,990
Delivered Lumens (With Fiber Accessory Kit)	1,006	990	948	1,445	1,472	1,299	2,091	2,060	1,965	3,108	3,121	2,965
B.U.G. Rating*	B1-U3-G1	B1-U3-G1	B1-U0-G0	B1-U3-G2	B1-U3-G2	B3-U3-G1	B1-U3-G2	B1-U3-G2	B2-U3-G1	B2-U4-G2	B2-U4-G2	B3-U4-G2
CCT (Kelvin)	5,000K	4,000K	3,000K	5,000K	4,000K	3,000K	5,000K	4,000K	3,000K	5,000K	4,000K	3,000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	12W	18W	18W	26W	26W	26W	26W	26W	26W

NOTES: 1) Includes shielded and clear. 2) B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (25,000 Hours)	Theoretical L70 (Hours)
XTOR2B Model		
25°C	> 90%	240,000
40°C	> 88%	220,000
50°C	> 88%	201,000
XTOR6B Model		
25°C	> 90%	198,000
40°C	> 87%	180,000
50°C	> 86%	167,000
XTOR12B Model		
25°C	> 85%	122,000
40°C	> 77%	106,000



CURRENT DRAW

Voltage	Model Series		
	XTOR12B	XTOR6B	XTOR2B
120V	0.106A	0.11A	0.23A
208V	0.064A	0.07A	0.13A
240V	0.053A	0.06A	0.11A
277V	0.048A	0.05A	0.10A
347V	0.038A	0.05A	0.08A

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page 3 — **XTOR** CROSSTOUR LED

ORDERING INFORMATION

Sample Number: XTOR2B-W-W-P-PC

Series	LED Kelvin Color	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
XTOR2B=Small Door, 12W **XTOR6B**=Small Door, 18W **XTOR6B**=Small Door, 26W **XTOR6B**=Medium Door, 26W	**[Blank]**=Bright White (Standard) **W**=Neutral White, 4000K **A**=Warm White, 3000K	**[Blank]**=Carbon Brown (Standard) **W**=Summit White **BZ**=Bronze **AP**=Gray **DM**=Graphite Metallic **DP**=Dark Platinum	**PCS**=Photocontrol 120V * **PCH**=Photocontrol 208-277V * **SPTU**=24V ** **HA**=-40°C High Ambient *	**WG**=Wire Guard * **XTOR12B-ENC**=Accessory Housing*(L)* **XTOR12B-ENC-W**=Accessory Housing*(L)* **XTOR12B-ENC-P**=Accessory Housing*(L)* **FSP**=Fiber Spacer for Dressing Clearance * * * * * * * * **FSPW**=Fiber Spacer for Wall Plate, Carbon Brown **FSPW-BLK**=Fiber Spacer for Wall Plate, Summit White

NOTES:
1) Design Lifetime Centerlum® Chart Rated and classified for use in UL Standard and DLC Premium, refer to specsheet geographically for details.
2) Contact factory for specifications.
3) Fiber Spacer Kit (FSP) required.
4) Photocontrol (PC) and Wire Guard (WG) options are available with 24W, 26W and 36W XTOR2B1 and available with 48W and 96W XTOR6B combinations.
5) Photocontrol (PC) and Wire Guard (WG) options are available with XTOR12B.
6) Photometric accessories: acceptance and tolerance is ±1% of nominal. CRMQ lenses, shroud and hanging mounts, and special wattages are by quote.

STOCK ORDERING INFORMATION

12W Series	18W Series	26W Series	36W Series
XTOR12B-12W, 5000K, Carbon Bronze	**XTOR18B**-18W, 5000K, Carbon Bronze	**XTOR26B**-26W, 5000K, Carbon Bronze	**XTOR36B**-36W, 5000K, Carbon Bronze
XTOR12B-W-12W, 4000K, Carbon Bronze	**XTOR18B-W**-18W, 4000K, Carbon Bronze	**XTOR26B-W**-26W, 4000K, Carbon Bronze	**XTOR36B-W**-36W, 4000K, Carbon Bronze
XTOR12B-WT-12W, 4000K, Summit White	**XTOR18B-WT**-18W, 4000K, Summit White	**XTOR26B-WT**-26W, 4000K, Summit White	**XTOR36B-WT**-36W, 4000K, Summit White
XTOR12B-BR-12W, 4000K, Carbon Bronze	**XTOR18B-PC1**-18W, 5000K, 120V PC, Carbon Bronze	**XTOR26B-PC1**-26W, 5000K, 120V PC, Carbon Bronze	**XTOR36B-PC1**-36W, 4000K, 120V PC, Carbon Bronze
	XTOR18B-WPC1-18W, 4000K, 120V PC, Summit White	**XTOR26B-WPC1**-26W, 4000K, 120V PC, Carbon Bronze	**XTOR36B-WPC1**-36W, 4000K, 120V PC, Carbon Bronze
	XTOR18B-PC2-18W, 5000K, 208-277V PC, Carbon Bronze	**XTOR26B-PC2**-26W, 5000K, 208-277V PC, Carbon Bronze	
	XTOR18B-WPC2-18W, 4000K, 208-277V PC, Summit White		

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Lumark

Catalog #	XTOR6BRL
Project	SOUTH LOOP WATERPARK
Comments	
Prepared by	
Type	B
Date	10/02/19

DESCRIPTION

The patented Lumark Crosstour™ MAXX LED wall pack series of luminaires provides low-profile architectural style with super bright, energy efficient LEDs. The low profile, rugged, die-cast aluminum construction, universal back box and hinged door with stainless steel hardware allow easy access to the compartment make the Crosstour maintenance friendly. The Crosstour wall luminaire is ideal for walkways, inverted mount for facade/canopy illumination, perimeter and landscape illumination, parking areas, storage facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

SPECIFICATION FEATURES

Construction
Low-profile LED designs with rugged, die-cast aluminum construction. Back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff housing styles incorporate a full cutoff and refractive lens design. Full cutoff housing styles incorporate a full cutoff and refractive lens design. Full cutoff and refractive lens designs are available in 36W, 81W and 162W. Potential pending secure lock hinge feature allows for safe and easy door access. Fixtures are available in 120V, 277V and 347V. Fixtures are UL listed for wet locations. Fixtures are electrically connectable with the supplied push-in connectors. Back box includes three knock-out, 1/2" NPT threaded conduit entry points. The back box is secured by four lug bolts allowing for easy positioning of the fixture during installation to pole. One-piece silicone gasket seals door and back box. Not recommended for cut-wash applications.

Optical
Silicone sealed optical LED assembly designed for maximum forward throw. Solid state LED light source. Housing is protected with a durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand severe climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

Emergency Egress
Optional integral cold weather battery pack provides 90 minutes emergency operation (not which human packages in cool 5000K, neutral 4000K, or warm 3000K LED color temperature (CCT).

Electrical
LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 58W, 81W and 162W models operate at 700mA. 108W, 162W models operate at 1050mA. 120V, 277V, 347V models available in 58W and 81W models only. Crosstour MAXX luminaires maintain greater than 80% of initial light output after 100,000 hours of operation. Four knockouts NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical junction box. Fixtures are rated for electronic driver. Incorporates surge protection, 10kV/5kA (5kV/2.5kA in 480V 40Hz, or 347V 60Hz universal operation. 480V is compatible for use with 480Y Wye systems only.

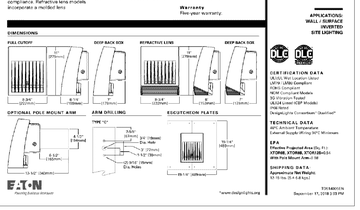
Finish
Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

XTOR
CROSSTOUR
MAXX LED

APPLICATIONS
WALL / SURFACE
INVERTED
SITE LIGHTING

DIMENSIONS



CERTIFICATION DATA

UL/cUL Wet Location Listed
CSA - LR48 Compliant
IP65 Ingress Rating
RoHS Compliant
NOM Compliant Models
IK08 Impact Resistance Rated
Title 24 Compliant
Designed to Comissioner "Qualified"

TECHNICAL DATA

40°C Maximum Ambient Temperature
Rated at Supply Wiring 90°C Minimum

EPA

Crosstour Projected Area (ft.²):
XTOR6BRL:
.4 ft.² (.037 m²)

SHIPPING DATA

Approximate Net Weight:
10.75 lbs. (5.4 kgs.)

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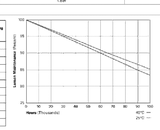
page 2 — **XTOR** CROSSTOUR MAXX LED

POWER AND LUMENS BY FIXTURE MODEL

	58W Series			81W Series			108W Series			162W Series		
LED Information	XTOR58	XTOR58BRL	XTOR58-W	XTOR81	XTOR81BRL	XTOR81-W	XTOR108-P	XTOR108BRL-P				
Delivered Lumens	6,105	5,831	5,515	8,154	8,118	7,848	10,815	10,815				
B.U.G. Rating	B1-U0-G1	B2-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2				
CCT (Kelvin)	5000K	5000K	3000K	4000K	4000K	3000K	3000K	3000K				
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70				
Power Consumption (Watts)	58W	58W	58W	58W	58W	58W	58W	58W				
	81W Series											
LED Information	XTOR81	XTOR81BRL	XTOR81-W	XTOR108BRL-W	XTOR108-P	XTOR108BRL-P						
Delivered Lumens	8,154	8,118	8,154	7,848	10,815	10,815						
B.U.G. Rating	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2						
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K						
CRI (Color Rendering Index)	70	70	70	70	70	70						
Power Consumption (Watts)	81W	81W	81W	81W	81W	81W						
	162W Series											
LED Information	XTOR12B	XTOR12BRL	XTOR12B-W	XTOR12BRL-W	XTOR12B-P	XTOR12BRL-P						
Delivered Lumens	12,038	12,038	12,038	12,038	12,038	12,038						
B.U.G. Rating	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2						
CCT (Kelvin)	5000K	5000K	4000K	4000K	3000K	3000K						
CRI (Color Rendering Index)	70	70	70	70	70	70						
Power Consumption (Watts)	162W	162W	162W	162W	162W	162W						

FIGRESS Information	XTOR58, XTOR58 and XTOR58 Full Cutoff GR Optics LED	XTOR81, XTOR81 and XTOR81 Refractive Lens GR Optics LED
Delivered Lumens	5000	4000
B.U.G. Rating	N/A	N/A
CCT (Kelvin)	4000K	4000K
CRI (Color Rendering Index)	85	85
Power Consumption (Watts)	58W	58W

LUMEN MAINTENANCE



CURRENT DRAW

Voltage	Model Series		
	XTOR6B	XTOR6B	XTOR6B-CSP (Factory Battery)	XTOR6B-CSP (Factory Battery)
120V	0.51	0.71	0.84	1.40 (1.8)	0.5 (0.2)
208V	0.3A	0.39	0.54	--	--
240V	0.26	0.35	0.46	--	--
277V	0.22	0.31	0.39	0.36 (0.2)	0.5 (0.2)
347V	0.19	0.25	0.32	--	--
480V	0.14	0.18	0.24	--	--

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page 3 — **XTOR** CROSSTOUR MAXX LED

ORDERING INFORMATION

Sample Number: XTOR2B-W-W-P-PC

Series	LED Kelvin Color	Housing Color	Options (Add as Suffix)
XTOR2B=Small Door, 12W **XTOR6B**=Small Door, 18W **XTOR6B**=Small Door, 26W **XTOR6B**=Medium Door, 26W **Refractive Lens** **XTOR6BRL**=Small **XTOR6BRL**=Medium	**[Blank]**=Bright White (Standard) **W**=Neutral, 4000K **W**=Warm, 3000K	**[Blank]**=Carbon Brown (Standard) **W**=Summit White **BZ**=Bronze **BK**=Black **SG**=Sienna **AP**=Gray **DM**=Graphite Metallic **DP**=Dark Platinum	**PCS**=Photocontrol 120V * **PCH**=Photocontrol 208-277V * **PBS**=Photoshoot Aiming Bracket **SPTU**=24V ** **HA**=-40°C High Ambient * **SBR**=Low Brightness Option for Dressing Clearance * * * * * * * * **CBP**=Cold Weather Battery Pack * * * * * * **HLC**=High Lumen *

Accessories (Order Separately)

WG, XTOR6WG=Crosstour MAXX Wire Guard
FSTRU=Fiber Spacer Adapter for 2-3/8" O.D. Tenon *
FSTRU-CUP=Fiber Spacer Adapter for 2-3/8" O.D. Recess *
FSTRU-DOUBLE=Fiber Spacer Adapter for 2-3/8" O.D. Tenons *
FSTRU-TRIPLE=Fiber Spacer Adapter for 2-3/8" O.D. Tenons *
VAS48-RX-SINGLE=Tenon Adapter for 2-1/8" O.D. Tenon *
VAS48-RX-DOUBLE=Tenon Adapter for 2-1/8" O.D. Tenons *
VAS48-RX-TRIPLE=Tenon Adapter for 2-1/8" O.D. Tenons *
VAS48-RX-QUAD=Tenon Adapter for 2-1/8" O.D. Tenons *
VAS48-RX-CUP=Tenon Adapter for 2-1/8" O.D. Recess *
VAS48-RX-SQUARE=Tenon Adapter for 2-1/8" O.D. Tenon *
VAS48-RX-CROSS=Tenon Adapter for 2-1/8" O.D. Tenons *
FSRW=Wireless Configuration Tool for Discussion Series *

NOTES:
1) Design Lifetime Centerlum® Chart Rated and classified for use in DLC Standard and DLC Premium, refer to specsheet geographically for details.
2) Not available with photocontrol.
3) Only lens hole is available for 24W, 36W, CBP, HMA, HLC, BR and WG options.
4) Not available with HMA and HLC options.
5) Not available with wire guard (WG) and hinge mounting.
6) Only for use with 48W XTOR models. Fits TMS1 but but not with engineered options. Impacted or provided qualified at center projected aspect ratio (centerlum) based on Fiber Plate Mount (R-1 Data, Fiber Plate Mount Arm-2 SR).
7) Not available with HMA and HLC options.
8) Use XTOR2B with 24W or 36W cables for photometric tests only to fit 2TB mast.
9) Use XTOR2B with 24W or 36W cables for photometric tests only to fit 2TB mast.
10) Fiber Spacer Kit (FSP) required. Contact factory for specifications for additional support information.
11) For use in decorative applications. Exterior photometrics should be qualified.
12) 3000 lms, 3000 K only.
13) Not for use in Canada. Contact factory for specifications.
14) Includes integral photocontrol.
15) Photocontrol (PC) and Wire Guard (WG) options are available in including high and low ambient, dedicated, long lifetime, cutoff, and more. Contact your lighting representative or Contact factory for more information.
16) 120V or 277V operation only.
17) Not available with 24W, 36W, 48W or 96W.
18) Not available in XTOR2B or XTOR6B models.
19) Replace 24 with the lamp color.

STOCK ORDERING INFORMATION

58W Series	81W Series	108W Series
Full Cutoff		
XTOR58=58W, 5000K, Carbon Bronze	**XTOR81**=81W, 5000K, Carbon Bronze	**XTOR108**=108W, 5000K, Carbon Bronze
XTOR58-PC=58W, 5000K, Carbon Bronze	**XTOR81-PC**=81W, 5000K, 120V PC, Carbon Bronze	
XTOR58-WT=58W, 5000K, Summit White	**XTOR81-WT**=81W, 5000K, Summit White	
XTOR58-W=58W, 4000K, Carbon Bronze	**XTOR81-PC2**=81W, 5000K, 208-277V PC, Carbon Bronze	
XTOR58-PM=58W, 5000K, Pole Mount Arm, Carbon Bronze	**XTOR81-PM**=81W, 5000K, Pole Mount Arm, Carbon Bronze	
XTOR58-PC3=58W, 5000K, 208-277V PC, Carbon Bronze	**XTOR58-347PC**=58W, 5000K, Carbon Bronze, 347V	
Refractive Lens		
XTOR6BRL-5000=58W, 5000K, Refractive Lens, Carbon Bronze	**XTOR6BRL**=81W, 5000K, Refractive Lens, Carbon Bronze	**XTOR12BRL**=108W, 5000K, Refractive Lens, Carbon Bronze
XTOR6BRL-PC1=58W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	**XTOR6BRL-PC1**=81W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	**XTOR12BRL-W**=108W, 4000K, Refractive Lens, Carbon Bronze
XTOR6BRL-WT=58W, 5000K, Refractive Lens, Summit White	**XTOR6BRL-WT**=81W, 5000K, Refractive Lens, Summit White	**XTOR12BRL-347PC**=108W, 5000K, Refractive Lens, Carbon Bronze, 347V
XTOR6BRL-W=58W, 4000K, Refractive Lens, Carbon Bronze	**XTOR6BRL-PC2**=81W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	
XTOR6BRL-PMA=58W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	**XTOR6BRL-PMA**=81W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	
XTOR6BRL-PC3=58W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	**XTOR6BRL-347PC**=81W, 5000K, Refractive Lens, Carbon Bronze, 347V	
XTOR6BRL-347PC=58W, 5000K, Refractive Lens, Carbon Bronze, 347V		

EATON
Powering Business Worldwide

Eaton
1000 Eaton Blvd.
Cleveland, OH 44122
United States
877-ETN-CARE
eaton.com/lighting

Specifications and dimensions subject to change without notice.

TD034016EN
September 17, 2019 3:02 PM

Portfolio

Catalog #	LDB840D010EU8R30S050 6LBWL11
Project	SOUTH LOOP WATERPARK
Comments	
Prepared by	
Type	C
Date	10/02/19

DESCRIPTION

8 inch LED recessed downlight, medium, or wide beam downlight designed for use in commercial, institutional, and residential applications. Optical system producing smooth distribution with excellent light control and low aperture brightness. Lumen packages range from 1030 to 7030 with color temperatures of 3000K, 2700K, 3500K, 4000K, and 5000K. VividTune Optic to warm technology - similar to halogen at full power, dims to 2700K color temperature. Color temperature shift is linear and warm glow within the lower. Available with the technology - select the color temperature from warm white to cool white while independently controlling intensity.

SPECIFICATION FEATURES

Lower Shielding Reflector
Painted die cast aluminum or spun aluminum lower reflector with a linear wiper optical chamber providing superior lumen output. Specular anodized aluminum optical reflectors are offered in all Portfolio Albeit® fixtures. Available with non-specular polished trim. Reflector is retained with two stainless steel tether cables for safe light as the finished ceiling surface.

Plaster Frame / Collar
Die cast aluminum 1-1/2" deep plaster frame/collar with mounting ears for 2", universal mounting bracket accepts 1/2" EMT, C-channel and bar hangers and adjusts 5° vertically from above and below the ceiling.

Junction Box
Listed for 30 AWG Feed in, four 6x32 NPC conductors and feed through, 4 x 4 x 2-1/8" (101 x 101 x 54) deep junction box positioned to allow straight conduit runs. Leave connectors for simple push in wiring.

Thermal
Aluminum heat sink conducts heat away from the LED module for optimal performance and long life.

LED
Chip on board with a multitude of highly efficient white LEDs, combined with a high reflectance upper reflector and downward optical system to ensure a smooth distribution with no pixelation. Rated for 50,000 hours at 70% lumen maintenance. Fully protected, thermally protected, and short circuit protected. Color consistency tolerances are exceeded. Color varieties within 3-step MacAdam ellipses. Quick disconnect allows for field lamp replacement (lamp must be removed before lanting). Available in 90, 90 or 97 CRI.

Driver
Standard 120-277V 0-10V dimming driver provides flicker free dimming from 100% to 1% (offered up to 1000 lumens). Optional: 120V Triac dimming driver (Triac Lightly, TRAC or Lutron®). Ecosystem Driver can be accessed from above or through the aperture.

Connected Lighting Systems
Allows the minimum daylight sensor includes control module, sensor and cable allowing ease with the complementary lighting control system.
LumaStar Pro powered by Enlighted: wireless site mount sensor and relay accessory enables wireless control using a site mount sensor and relay.
Distributed low voltage power system combines power, lighting, and controls with ease of installation.

Code Compliance
Thermally protected and short circuit protected. Meets Class 2 covered ceiling. Meets Class 2 covered ceiling. Meets fire assessment. Optional City of Chicago environmental air (CCEA) marking for plenum applications. Meets emissions per FCC 47CFR Part 15 Subpart B. Meets Canada ICES-005. Insulation must be kept 3" from top and sides of housing. C rated up to 1500 lumens. 5000 lumen and above are marked "suitable for use in insulation". Lighting, DMX or Lutron® Ecosystem. Driver can be accessed from above or through the aperture.

LD6B EU6B
6LBW 6LBM
6LBN

1000 - 7000 lumens LED

Die cast or Spun Aluminum
Narrow, Medium, or Wide Beam
Reflector
Non-Conductive

VividTune
D2W

ORDERING INFORMATION

SAMPLE NUMBER: LDB8-EU8R30S050-6LBWL11

Housing	Lumens*	Voltage*	Driver	Options*
LDB8=LED Downlight 8" Nominal Housing **LDNBP**=LED Downlight Narrow Beam Pendant	**EU8**=7000 lumens **8L**=5000 lumens **6L**=3500 lumens **4L**=2000 lumens **EB**=4000 lumens** **8L**=3000 lumens** **6L**=2000 lumens**	Blank=120-277V 2=347V Blank=Standard Constant Lumen	**[Blank]**=Standard Dimming (1% to 100%, 120V-277V) **TRIAC**=Triac Dimming (5% to 100%, 120V) **0-10V**=0-10V Dimming (1% to 100%, 120-277V) **DALT**=Data Ready Lutron® Ecosystem Dimming (0% to 100%, 120-277V) **DALT-D**=DALT Ecosystem Dimming (0% to 100%, 120V-277V) **DALT-E**=DALT Ecosystem Dimming (1% to 100%, 120-277V) **DALT-E-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V) **DALT-E-D-D-D-D-D-D-D-D-D-D-D-D**=DALT Ecosystem Dimming (1% to 100%, 120V-277V)	**EWSDB**=Bluetooth Emergency Module with Remote Test Switch **EWSDB-D**=Bluetooth Emergency Module with Remote Test Switch **EWM**=1 Hr Emergency Module with Remote Test Switch **EWMDB**=Bluetooth Emergency Module with Integral Test Switch **EWLT**=7W Low Voltage Emergency Module with Remote Test Switch **EWLTDB**=7W Low Voltage Emergency Module with Integral Test Switch **EWLTM**=3W Low Voltage Emergency Module with Remote Test Switch **EWLTMDB**=3W Low Voltage Emergency Module with Integral Test Switch **EWPM**=Battery Integral Remote Monitoring (twilight sensor, included control module, remote cable, and the mesh) **LWTPD**=Factory Installed LumaStar Pro Wireless sensor kit

SAMPLE NUMBER: EU8R30S050

Finish Modifier	Lumen Levels*	CRI	Color*	
DUNNE=* Vertical LED Module	**7000**=7000 lumens, 50 CRI, Zero D Warm, IC rated **7000/90**=7000 lumens, 90 CRI, Zero D Warm, IC rated **7000/90/90**=7000 lumens, 90 CRI, Zero D Warm **6000/90/90**=6000 lumens, 90 CRI, Zero D Warm **5000/90/90**=5000 lumens, 90 CRI, Zero D Warm	**50 CRI**=50 Minimum **90 CRI**=90 Minimum **90 CRI**=90 Minimum	**50 CRI** **27**=2700K **35**=3500K **35**=3500K **40**=4000K **50**=5000K	**90 CRI** **27**=2700K **35**=3500K **35**=3500K **40**=4000K **50**=5000K

Zero D Warm
1000/2700K=1000 lumens, 50 CRI, Zero D Warm, IC rated
7000/2700K=7000 lumens, 50 CRI, Zero D Warm, IC rated
7000/90/2700K=7000 lumens, 90 CRI, Zero D Warm
6000/90/2700K=6000 lumens, 90 CRI, Zero D Warm

Tunable white**
1000/2700K/3500K=1000, 1600, 2000 lumens, 50 CRI, tunable white 2700K-3500K
7000/2700K/3500K=7000, 9000, 11000 lumens, 50 CRI, tunable white 2700K-3500K
7000/90/2700K/3500K=7000, 9000, 11000 lumens, 90 CRI, tunable white 2700K-3500K

SAMPLE NUMBER: EU8R30S050-6LBWL11

Trim	Downloaded*	Flange	Finish	Options
6LBW=LED Downlight Trim	**N**=Narrow (30° Beam), Specular Aluminum **M**=Medium (60° Beam), Specular Aluminum **W**=Wide (120° Beam), Specular Aluminum **BL**=Narrow (25° Beam), Specular Aluminum** **PN**=Pinhole Narrow (5° Beam), Specular Molded white, non-conductive** **CL**=Clear Window (30° Beam), Die Cast Aluminum **SN**=Satin (30° Beam), Specular Aluminum	**S**=White Polymer Self-Flanged** **L**=Black Polymer Self-Flanged** **S**=White Parent Self-Flanged	**W**=Specular Clear* Aluminum Reflector Clear* **WM**=White Matte* **BM**=Black Matte* **GPM**=Graphite Matte*	**R**=Specular Brass* Aluminum Reflector Brass* **MB**=Matte Black* **MBR**=Matte Metallic Brass*

Accessories

HSMA=Motion Activated Kit (1 Aperture Housings, Specify Stage)
SSMA=Motion Only Sensor Kit (1 Aperture Housing, Specify Color)
FRSM=Flange Mounting Bracket, 2" Long, Pair
FRSM-P=Flange Mounting Bracket, 2" Long, Pair
LCSM=Flange Mounting Bracket, 2" Long, Pair
LCSM-P=Flange Mounting Bracket, 2" Long, Pair
Bar Hangers
HBS=C-Channel Bar Hanger, 36" Long, Pair
**HBM

PL201900184
PL2019-184

COMcheck Software Version 4.1.1.0

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
Project Title: South Loop Waterpark
Project Type: New Construction
Exterior Lighting Zone: 4 (High activity metropolitan commercial districts)

Construction Site:
Lindau Lane
Bloomington, MN 55425

Owner/Agent:

Designer/Contractor:
Greg Gergen
Hunt Electric
Bloomington, MN 55420

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Other door (not main entry)	112 ft of	20	Yes	2240
Walkway >= 10 feet wide	6246 ft2	0.2	Yes	1249
Loading dock	673 ft2	0.5	Yes	336
			Total Tradable Watts (a) =	3845
			Total Allowed Watts =	3845
			Total Allowed Supplemental Watts (b) =	1300

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 1300 watts may be applied towards compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Other door (not main entry) (112 ft of door, width): Tradable Wattage				
LED 2: B: XTOR Maxx Wall Pack: Other:	1	3	58	174
LED 1: A: XTOR Wall Pack: Other:	1	15	18	270
Walkway >= 10 feet wide (6246 ft2): Tradable Wattage				
LED 3: C: LDGB Recessed Downlight: Other:	1	23	42	961
Loading dock (673 ft2): Tradable Wattage				
LED 2: B: XTOR Maxx Wall Pack: Other:	1	1	58	58
			Total Tradable Proposed Watts =	1463

Exterior Lighting PASSES: Design 72% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2010) Standard requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title: South Loop Waterpark — Report date: 10/02/19
Data Filename: Untitled.cck — Page 1 of 6

Greg Gergen - Electrical Designer
Name - Title

Signature

10/2/19
Date

Project Title: South Loop Waterpark — Report date: 10/02/19
Data Filename: Untitled.cck — Page 2 of 6

COMcheck Software Version 4.1.1.0

Inspection Checklist

Energy Code: 90.1 (2010) Standard

Requirements: 60.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2.8.c-1.1.8.4.1-2.8.1 [PR8]1	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder conductors sized in accordance with approved plans and branch circuits shown, connected load of 3% shown, conductors sized	☐Complies ☐Does Not ☑Not Observable ☑Not Applicable	
9.7 [PR8]1	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to mandatory requirements are claimed (required should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

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Data Filename: Untitled.cck — Page 3 of 6

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10]1	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	☐Complies ☐Does Not ☑Not Observable ☑Not Applicable	
9.4.1.7 [EL3]1	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.3 [EL7]1	Exterior grounds lighting over 100 W provides >60 lm/W unless on motion sensor or fixture is exempt from scope of code or from external LPD.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Project Title: South Loop Waterpark — Report date: 10/02/19
Data Filename: Untitled.cck — Page 4 of 6

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
9.4.3 [FI19]1	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Project Title: South Loop Waterpark — Report date: 10/02/19
Data Filename: Untitled.cck — Page 5 of 6

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HUNT
Electric Corporation

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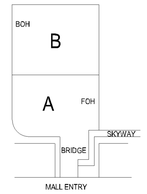
SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 — DATE: Issue Date

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REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

ENERGY CODE COMPLIANCE SHEETS

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	12" = 1'-0"

SHEET NUMBER

ES1.4