

April 14, 2020

S2 Architecture  
Suite 900, 110 – 12<sup>th</sup> Avenue SW  
Calgary, Alberta ■ T2R 0G7



Attention: Funke Adesanya / Michael Defina

**RE: BRIGHTPATH KANATA – Exterior Lighting Design**  
**Ottawa, Ontario**  
**SMP Project No.: 19-01-0307**

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Dear Funke and Michael,

This letter is to confirm the exterior lighting design for the Brightpath Kanata project.

All existing pole-mounted area lighting fixtures are to remain as existing per direction from Brightpath.

The existing wall-mounted floodlight fixtures, currently High-Intensity Discharge (HID) fixtures, are to be replaced with newer LED based fixtures.

The intention of the fixture replacement is to improve efficiency, reduce skyglow, and generally improve the appearance to match more modern standards and suit the exterior renovation of the facility. The current fixtures are energy inefficient relative to newer LED based fixtures and are also flood-light type fixtures which contribute to skyglow.

The current fixtures will be replaced on a one-for-one basis in their existing locations. Due to the modification of the catering entrance, two (2) additional fixtures will be installed, wall mounted, at that location. That entrance is in the approximate center of the site and as such, any lighting produced by the new fixtures will be well contained within the site.

The lighting pattern for the new replacement fixtures is significantly better in terms of cut-off, as compared to the existing fixtures. Though the photometrics of the existing fixtures is not available and cannot be modelled, they definitely have an uplight component; whereas the new fixtures are virtually guaranteed to have a better cut-off as it is a full cut-off fixture (no uplight).

The fixtures most likely to be used will be the Eaton XTOR fixture (see attached cut sheet). That fixture will replace the existing floodlight fixtures. A cylinder type fixture such as the DS-WD05 (see attached cut sheet) may be used near the catering entrance only. In truth it is unlikely to be used and we won't be able to confirm until the owner has returned after the covid pandemic has cleared.

Hopefully, the above information answers the questions of the authorities in Ottawa, but if not, please let myself or Brigitte know.

Yours truly,

**SMP Engineering**



Livio Barone, P.Eng., LEED AP  
Partner

Attachments:

Cooper Lumark XTOR lighting fixture cut sheets (3 pages)  
WAC Lighting DS-WD05 lighting fixture cut sheet (1 page)

## DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaires provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

## SPECIFICATION FEATURES

### Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

### Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

### Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized

<b>Catalog #</b>		<b>Type</b>	
<b>Project</b>			
<b>Comments</b>		<b>Date</b>	
<b>Prepared by</b>			

electrical wiring compartment.

Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

### Finish

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

### Warranty

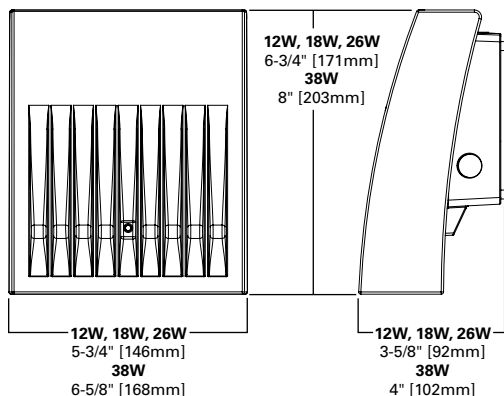
Five-year warranty.



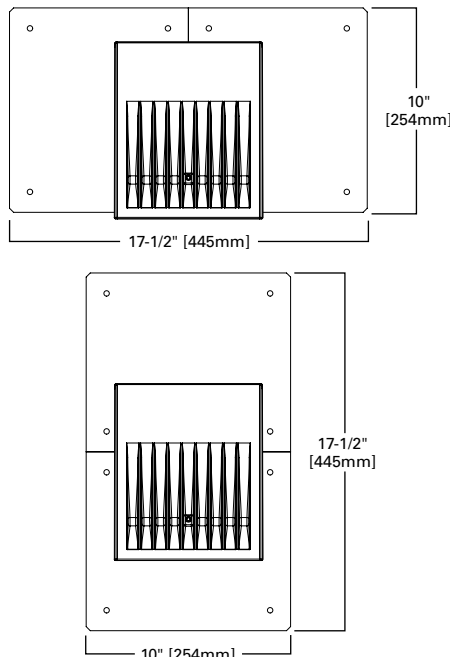
## XTOR CROSSTOUR LED

**APPLICATIONS:**  
WALL / SURFACE  
POST / BOLLARD  
LOW LEVEL  
FLOODLIGHT  
INVERTED  
SITE LIGHTING

## DIMENSIONS



## ESCUTCHEON PLATES



## CERTIFICATION DATA

UL/cUL Wet Location Listed  
LM79 / LM80 Compliant  
ROHS Compliant  
ADA Compliant  
NOM Compliant Models  
IP66 Ingressed Protection Rated  
Title 24 Compliant  
DesignLights Consortium® Qualified\*

## TECHNICAL DATA

40°C Maximum Ambient Temperature  
External Supply Wiring 90°C Minimum

## EPA

Effective Projected Area (Sq. Ft.):  
XTOR1B, XTOR2B, XTOR3B=0.34  
XTOR4B=0.45

## SHIPPING DATA:

Approximate Net Weight:  
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

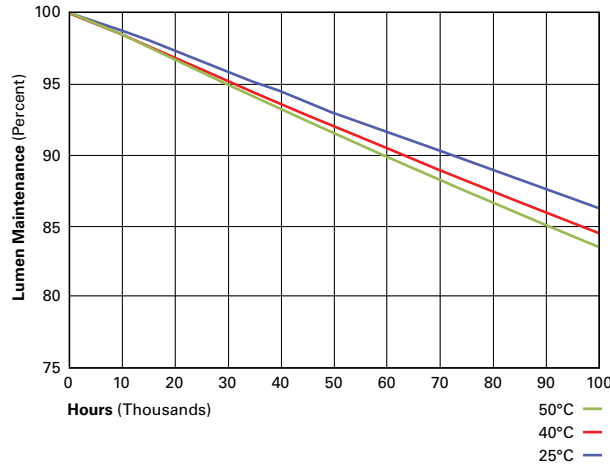
**POWER AND LUMENS BY FIXTURE MODEL**

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) <sup>1</sup>	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating <sup>2</sup>	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. 2 B.U.G. Rating does not apply to floodlighting.

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
<b>XTOR1B Model</b>		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
<b>XTOR2B Model</b>		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
<b>XTOR3B Model</b>		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
<b>XTOR4B Model</b>		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000



**CURRENT DRAW**

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

**ORDERING INFORMATION**

Sample Number: XTOR2B-W-WT-PC1

Series <sup>1</sup>	LED Kelvin Color	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
<b>XTOR1B</b> =Small Door, 12W <b>XTOR2B</b> =Small Door, 18W <b>XTOR3B</b> =Small Door, 26W <b>XTOR4B</b> =Medium Door, 38W	<b>[Blank]</b> =Bright White (Standard), 5000K <b>W</b> =Neutral White, 4000K <b>Y</b> =Warm White, 3000K	<b>[Blank]</b> =Carbon Bronze (Standard) <b>WT</b> =Summit White <b>BK</b> =Black <b>BZ</b> =Bronze <b>AP</b> =Grey <b>GM</b> =Graphite Metallic <b>DP</b> =Dark Platinum	<b>PC1</b> =Photocontrol 120V <sup>2</sup> <b>PC2</b> =Photocontrol 208-277V <sup>2,3</sup> <b>347V</b> =347V <sup>4</sup> <b>HA</b> =50°C High Ambient <sup>4</sup>	<b>WG/XTOR</b> =Wire Guard <sup>5</sup> <b>XTORFLD-KNC</b> =Knuckle Floodlight Kit <sup>6</sup> <b>XTORFLD-TRN</b> =Trunnion Floodlight Kit <sup>6</sup> <b>XTORFLD-KNC-WT</b> =Knuckle Floodlight Kit, Summit White <sup>6</sup> <b>XTORFLD-TRN-WT</b> =Trunnion Floodlight Kit, Summit White <sup>6</sup> <b>EWP/XTOR</b> =Escutcheon Wall Plate, Carbon Bronze <b>EWP/XTOR-WT</b> =Escutcheon Wall Plate, Summit White

**NOTES:**

1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Photocontrols are factory installed.
3. Order PC2 for 347V models.
4. Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
5. Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
6. Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

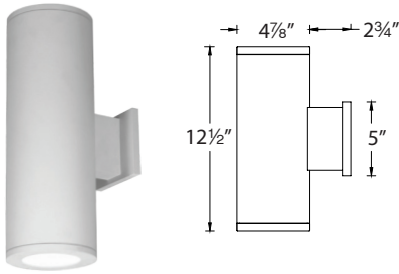
**STOCK ORDERING INFORMATION**

12W Series	18W Series	26W Series	38W Series
<b>XTOR1B</b> =12W, 5000K, Carbon Bronze	<b>XTOR2B</b> =18W, 5000K, Carbon Bronze	<b>XTOR3B</b> =26W, 5000K, Carbon Bronze	<b>XTOR4B</b> =38W, 5000K, Carbon Bronze
<b>XTOR1B-WT</b> =12W, 5000K, Summit White	<b>XTOR2B-W</b> =18W, 4000K, Carbon Bronze	<b>XTOR3B-W</b> =26W, 4000K, Carbon Bronze	<b>XTOR4B-W</b> =38W, 4000K, Carbon Bronze
<b>XTOR1B-PC1</b> =12W, 5000K, 120V PC, Carbon Bronze	<b>XTOR2B-WT</b> =18W, 5000K, Summit White	<b>XTOR3B-WT</b> =26W, 5000K, Summit White	<b>XTOR4B-WT</b> =38W, 5000K, Summit White
<b>XTOR1B-W</b> =12W, 4000K, Carbon Bronze	<b>XTOR2B-PC1</b> =18W, 5000K, 120V PC, Carbon Bronze	<b>XTOR3B-PC1</b> =26W, 5000K, 120V PC, Carbon Bronze	<b>XTOR4B-PC1</b> =38W, 5000K, 120V PC, Carbon Bronze
	<b>XTOR2B-W-PC1</b> =18W, 4000K, 120V PC, Carbon Bronze	<b>XTOR3B-W-PC1</b> =26W, 4000K, 120V PC, Carbon Bronze	<b>XTOR4B-W-PC1</b> =38W, 4000K, 120V PC, Carbon Bronze
	<b>XTOR2B-347V</b> =18W, 5000K, Carbon Bronze, 347V	<b>XTOR3B-347V</b> =26W, 5000K, Carbon Bronze, 347V	<b>XTOR4B-347V</b> =38W, 5000K, Carbon Bronze, 347V
	<b>XTOR2B-WT-PC1</b> =18W, 5000K, 120V PC, Summit White	<b>XTOR3B-PC2</b> =26W, 5000K, 208-277V PC, Carbon Bronze	

# TUBE ARCHITECTURAL DS-WD05

# WAC LIGHTING

## LED Wall Mounts



Fixture Type:

Catalog Number:

**DS-WD05-F-30S-BK**

Project:

Location:

### PRODUCT DESCRIPTION

The latest energy efficient LED technology in an appealing cylindrical profile delivers accent and wall wash lighting. Comes in various light distribution and beam angle options.

### FEATURES

- High performance exterior rated LED wall mount light
- Fixture can install upside down to alter light distribution
- Solid aluminum construction
- 5 year warranty

### SPECIFICATIONS

**Input:** Universal voltage 120V - 277VAC, 50/60Hz  
**Dimming:** Electronic low voltage (ELV) : 100% - 5%  
 0-10V: 100% - 1%  
**Light Source:** High output 3 Step Mac Adam Ellipse COB  
 Rated life of 60,000 hours at L70  
**Finish:** Electrostatically powder coated, white, black, bronze and graphite IP65 rated, ETL & cETL wet location listed  
**Standards:** Title 24 JA8-2016 Compliant  
**Operating Temp:** -13°F to 122°F (-25°C to 50°C)

### ORDERING NUMBER

Diameter	Watt	Beam	Beam Angle	Color	Temp	CRI	Reference Output <sup>1</sup>		Efficacy (lm/w)	Light Distribution	Finish
							Lumen	CBCP			
DS-WD05	5" 25W x2	S Straight up and down	16°	927S	2700K	90	1825 x 2	10050 x 2	73 x 2		
				27S	2700K	85	2190 x 2	12057 x 2	88 x 2		
				930S	3000K	90	1895 x 2	10427 x 2	76 x 2		
				30S	3000K	85	2300 x 2	12644 x 2	92 x 2		
				35S	3500K	85	2350 x 2	12937 x 2	94 x 2		
	DS-WD0534 5" 17W x2	N Straight up and down	25°	927S	2700K	90	1810 x 2	5280 x 2	72 x 2		
				27S	2700K	85	2170 x 2	6335 x 2	87 x 2		
				930S	3000K	90	1880 x 2	5478 x 2	75 x 2		
				30S	3000K	85	2275 x 2	6643 x 2	91 x 2		
				35S	3500K	85	2330 x 2	6797 x 2	93 x 2		
	DS-WD0534 5" 17W x2	F Straight up and down	33°	927S	2700K	90	1900 x 2	4515 x 2	76 x 2		
				27S	2700K	85	2280 x 2	5417 x 2	91 x 2		
				930S	3000K	90	1970 x 2	4685 x 2	79 x 2		
				30S	3000K	85	2390 x 2	5681 x 2	96 x 2		
				35S	3500K	85	2445 x 2	5812 x 2	98 x 2		
DS-WD0534 5" 17W x2	F Away from the wall	N/A	927A	2700K	90	2000 x 2	N/A	80 x 2			
			27A	2700K	85	2400 x 2	N/A	96 x 2			
			930A	3000K	90	2075 x 2	N/A	83 x 2			
			30A	3000K	85	2520 x 2	N/A	101 x 2			
			35A	3500K	85	2575 x 2	N/A	103 x 2			
DS-WD0534 5" 17W x2	F Towards the wall	N/A	927B	2700K	90	2000 x 2	N/A	80 x 2			
			27B	2700K	85	2400 x 2	N/A	96 x 2			
			930B	3000K	90	2075 x 2	N/A	83 x 2			
			30B	3000K	85	2520 x 2	N/A	101 x 2			
			35B	3500K	85	2575 x 2	N/A	103 x 2			
DS-WD0534 5" 17W x2	F One side each	N/A	927C	2700K	90	2000 x 2	N/A	80 x 2			
			27C	2700K	85	2400 x 2	N/A	96 x 2			
			930C	3000K	90	2075 x 2	N/A	83 x 2			
			30C	3000K	85	2520 x 2	N/A	101 x 2			
			35C	3500K	85	2575 x 2	N/A	103 x 2			
DS-WD0534 5" 17W x2	F One side each	N/A	927C	2700K	90	2000 x 2	N/A	80 x 2			
			27C	2700K	85	2400 x 2	N/A	96 x 2			
			930C	3000K	90	2075 x 2	N/A	83 x 2			
			30C	3000K	85	2520 x 2	N/A	101 x 2			
			35C	3500K	85	2575 x 2	N/A	103 x 2			

<b>BK</b>	Black	
<b>WT</b>	White	
<b>BZ</b>	Bronze	
<b>GH</b>	Graphite	

DS-WD05-\_\_\_\_\_ - \_\_\_\_\_ Example: DS-WD05-F930A-WT <sup>1</sup>Reference output shows 25W output. Multiply by 0.7 to determine output for 17W combinations.

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