

Project:	Type:
Product Code:	Date:

V041724



## 2" Square Downlight

**2" Downlight** delivers high quality light with field changeable optics

**Precision Lock Collar** eliminates overcutting and ensures flush installation

**Architectural Trims** are wet painted for a rich, matte finish

**Integrated Drivers** provide smooth dimming, ease of installation and serviceability

### INSTALLATION

#### Ceiling Thickness

New Construction: 1/2" up to 1 1/4"

Remodel: 5/8" up to 1 1/4"

#### Ceiling Material

Drywall, Millwork

### TRIMS

#### Style

Standard, Wall Wash, Pinhole, Micro Flange, Flangeless, Decorative

#### Finish

White, Black, Bronze, Clear Diffuse, Warm Diffuse

### LIGHT OUTPUT & DISTRIBUTION

#### Module

Downlight

#### Lumens (Power)

500 lm (9.5W), 750 lm (9.5W), 1000 lm (12.5W), 1250 lm (14.3W), 1500 lm (14.3W)

#### Color Quality

93 CRI, 2-step SDCM

#### Color Temperature

- 2700K
- 3000K
- 3500K
- 4000K
- Warm Dim (3000K–1800K)
- Tunable White (4000K–1800K)
- Tunable White (6500K–2700K)

#### Beam Spread

- Ultra Narrow Spot (10°)
- Narrow Spot (20°)
- Spot (30°)
- Flood (40°)
- Wide Flood (50°)
- Linear Spread (50°x30°)

### POWER & CONTROLS

#### Input Voltage

120 / 277V

#### Dimming

0-10V (1%), TRIAC/ELV (1%), DALI-2 (0.1%)

### RATINGS & CERTIFICATIONS

- IC Insulation Contact Rated (New Construction Only; IC for roll, batt, loose fill and spray foam)
- ASTM E283 Certified Air Tight
- Chicago Plenum
- UL Listed for Wet Location (Flanged Trims Only)
- RoHS Compliant
- NSF Listed (White and Black Finish Only)

### WARRANTY

5 year limited warranty; 50,000 hours



## PRODUCT BUILDER

### HOUSING

PRODUCT CODE		INSTALLATION		SHAPE	
<b>X2</b>	2" Housing	<b>NC</b>	New Construction	<b>S</b>	Square
		<b>CP</b>	Chicago Plenum		
		<b>RM</b>	Remodel <sup>1</sup>		

<sup>1</sup> Non-IC installation only; Flanged trims only; Not available with DALI-2 dimming; Not available for wood ceiling

### MODULE

PRODUCT CODE		LUMENS		CRI		CCT <sup>2</sup>		BEAM SPREAD		DIMMING	
<b>XMD</b>	Downlight	<b>05</b>	500 lm <sup>3</sup>	<b>9</b>	93 CRI	<b>27</b>	2700K	<b>UN</b>	Ultra Narrow Spot (10°) <sup>6</sup>	<b>O</b>	0-10V
		<b>07</b>	750 lm			<b>30</b>	3000K	<b>NS</b>	Narrow Spot (20°)	<b>T</b>	TRIAC/ELV
		<b>10</b>	1000 lm			<b>35</b>	3500K	<b>SP</b>	Spot (30°)	<b>D</b>	DALI-2 <sup>7</sup>
		<b>12</b>	1250 lm			<b>40</b>	4000K	<b>FL</b>	Flood (40°)		
		<b>15</b>	1500 lm			<b>3W</b>	Warm Dim (3000K - 1800K) <sup>4</sup>	<b>WF</b>	Wide Flood (50°)		
						<b>T1</b>	Tunable White (4000K - 1800K) <sup>5</sup>	<b>LS</b>	Linear Spread (50°x30°)		
						<b>T2</b>	Tunable White (6500K - 2700K) <sup>5</sup>				

<sup>2</sup> DarkSky approved is only applicable to CCT options less than or equal to 3000K and not compatible with decorative trims

<sup>3</sup> Only available with UN beam spread

<sup>4</sup> Only available in 1000 lm; Not available in Narrow Spot beam spread

<sup>5</sup> Only available in 1000 lm, DALI-2 dimming; Not available in Narrow Spot beam spread

<sup>6</sup> Only available in 500 lm, not available as an optical accessory

<sup>7</sup> Only available in 1000 lm with Tunable White CCT, 1000 lm Warm Dim or 1250 lm with static CCT

### TRIM

PRODUCT CODE		FINISH		OPTION	
<b>X2TSDS</b>	2" Standard Trim	<b>WH</b>	White	<b>[Blank]</b>	None
<b>X2TSDW</b>	2" Wall Wash Trim <sup>8</sup>	<b>BK</b>	Black	<b>MF</b>	Micro Flange <sup>9</sup>
<b>X2TSDP</b>	2" Pinhole Trim <sup>9,10</sup>	<b>BZ</b>	Bronze	<b>FL</b>	Flangeless <sup>9,11</sup>
		<b>CW</b>	Clear Diffuse, White Flange	<b>DO</b>	Decorative: Open <sup>12</sup>
		<b>WW</b>	Warm Diffuse, White Flange	<b>DH</b>	Decorative: Float <sup>12</sup>

<sup>8</sup> Recommended with Wide Flood beam spread

<sup>9</sup> Not available in Clear or Warm Diffuse finish

<sup>10</sup> Not available in Micro Flange

<sup>11</sup> Requires Flangeless Mud or Wood Kit in New Construction housings; Not compatible with Remodel Housing

<sup>12</sup> Only available in 750 lm, Standard style, White finish

## PRODUCT BUILDER

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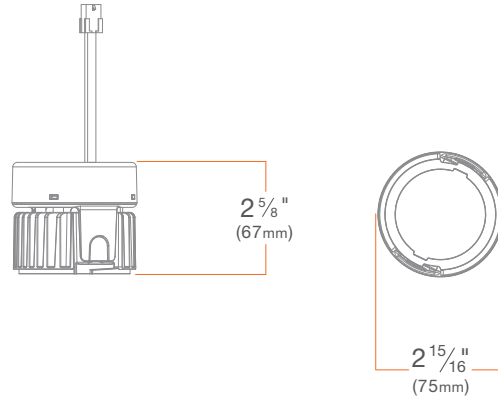
### OPTICS

<b>DXNS</b>	Narrow Spot (20°) Optic
<b>DXSP</b>	Spot (30°) Optic
<b>DXFL</b>	Flood (40°) Optic
<b>DXWF</b>	Wide Flood (50°) Optic
<b>DXLS</b>	Linear Spread (50°x30°) Optic
<b>DXOP</b>	Bundled Downlight Optics Kit <i>(Includes Narrow Spot, Spot, Flood, Wide Flood and Linear Spread)</i>

### ACCESSORIES

<b>X2KSMUD</b>	Flangeless Mud Kit <i>(Required for New Construction installation of Flangeless Trim in drywall ceiling)</i>
<b>X2KSWOOD</b>	Wood Kit <i>(Required for New Construction installation of all trims in wood ceiling)</i>
<b>X2KSTEMPLATE</b>	Router Template <i>(Recommended for routing 3 1/4" [82mm] cutout in wood ceiling)</i>

## MODULE



## PERFORMANCE SUMMARY

	STATIC CCT	WARM DIM	TUNABLE WHITE
<b>CCT</b>	2700K, 3000K, 3500K, 4000K	3000K - 1800K	4000K - 1800K; 6500K - 2700K
<b>LUMENS (POWER)</b>	500 lm (9.5W), 750 lm (9.5W), 1000 lm (12.5W), 1250 lm (14.3W), 1500 lm (14.3W)	1000 lm (12.0W)	1000 lm (14.3W)
<b>EFFICACY</b>	53 lm/W, 79 lm/W, 80 lm/W, 87 lm/W, 105 lm/W	83 lm/W	70 lm/W
<b>COLOR QUALITY</b>	93 CRI <sup>1</sup> , 2-step SDCM	93 CRI <sup>1</sup> , 3-step SDCM	93 CRI <sup>1</sup> , 3-step SDCM
<b>BEAM SPREAD</b>	Ultra Narrow Spot (10°), Narrow Spot (20°), Spot (30°), Flood (40°), Wide Flood (50°), Linear Spread (50° x 30°)	Spot (30°), Flood (40°), Wide Flood (50°), Linear Spread (50° x 30°)	Spot (30°), Flood (40°), Wide Flood (50°), Linear Spread (50° x 30°)
<b>DIMMING</b>	0-10V, TRIAC/ELV, DALI-2	0-10V, TRIAC/ELV, DALI-2	DALI-2
<b>LED CHIP</b>	Cree	Bridgelux	Bridgelux
<b>LISTINGS</b>	ENERGY STAR <sup>®</sup> Qualified <sup>2</sup> , California Title 24 2019-2022 JA8-E compliant, UL Listed for Wet Location, UL Certified US-CA, Declare, RoHS compliant, DALI-2 Compliant, NSF/ANSI 2 Listed <sup>3</sup> , Dark Sky Compliant <sup>4</sup>		

<sup>1</sup> Tested in accordance to IESNA LM-79-2008

<sup>2</sup> Refer to ENERGY STAR Certified light fixtures database

<sup>3</sup> In accordance to NSF/ANSI 2 for Splash Zone having designated trim finishes

<sup>4</sup> Only applicable to CCT options less than or equal to 3000K and not compatible with decorative trims

## ADDITIONAL

**INPUT VOLTAGE:** 120/277V, 50/60Hz

**MAX INPUT CURRENT (120V):** 0.13 amps

**MAX INPUT CURRENT (277V):** 0.06 amps

**CONNECTOR:** 6-pin Molex

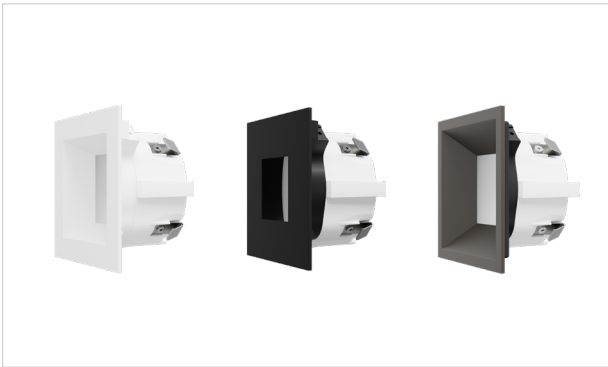
**POWER FACTOR:** Greater than 0.9

**TOTAL HARMONIC DISTORTION:** Less than 20%

**AMBIENT OPERATING TEMPERATURE:** -20°C to 40°C

**WARRANTY:** 5 year limited warranty; 50,000 hours at 70% lumen maintenance

**TRIMS**



**SUMMARY**

**CONSTRUCTION:** Die-cast aluminum

**FINISH:** Wet paint

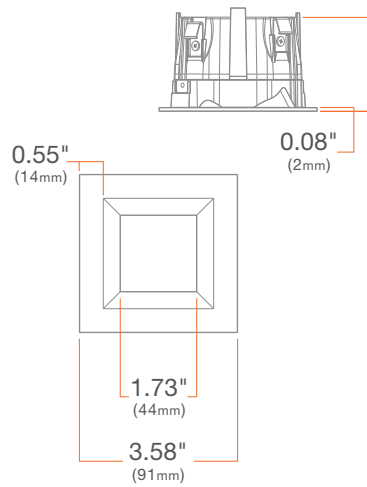
**DECORATIVE:** Acrylic diffuser

**INSTALLATION:** Precision Lock Collar included with Flanged or Micro Flange Trim and Flangeless Mud or Wood Kit

**WARRANTY:** 5 year limited warranty

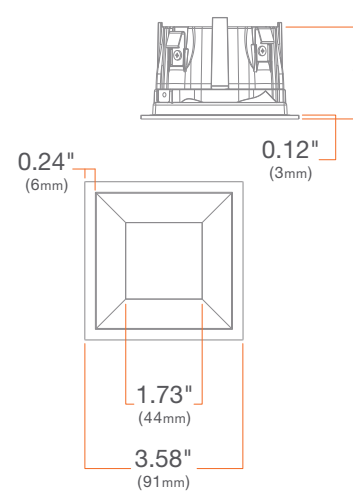
**Standard**

**X2TSDSWH**



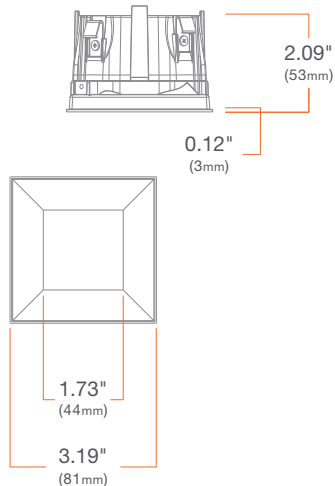
**Standard Micro Flange**

**X2TSDSWHMF**



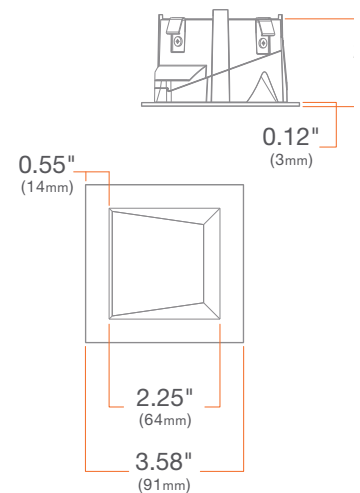
**Standard Flangeless**

**X2TSDSWHFL**



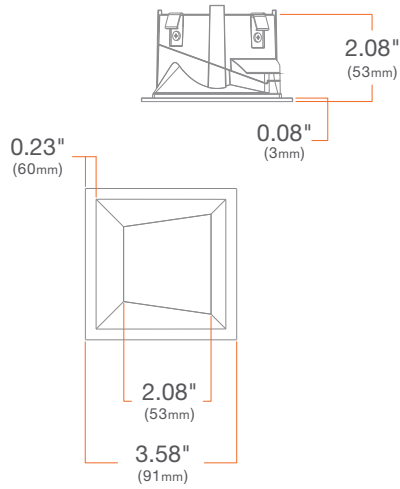
**Wall Wash**

**X2TSDWWH**



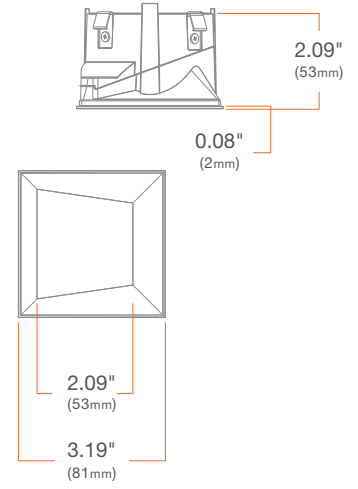
Wall Wash Micro Flange

X2TSDWWHMF



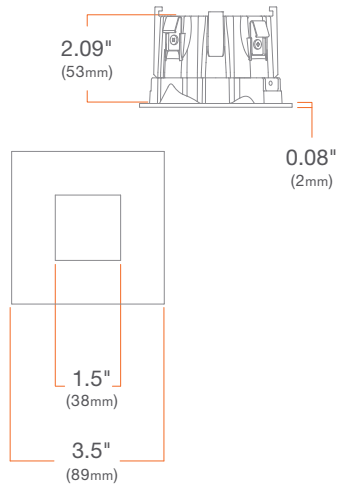
Wall Wash Flangeless

X2TSDWWHFL



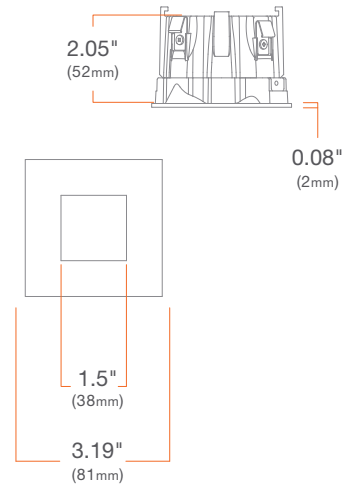
Pinhole

X2TSDPWH



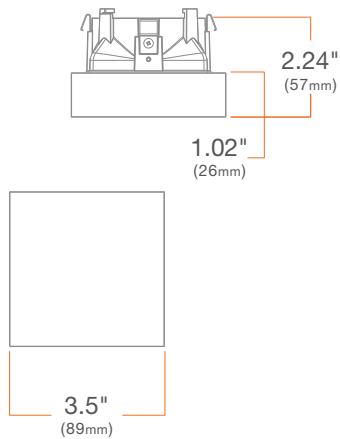
Pinhole Flangeless

X2TSDPWHFL



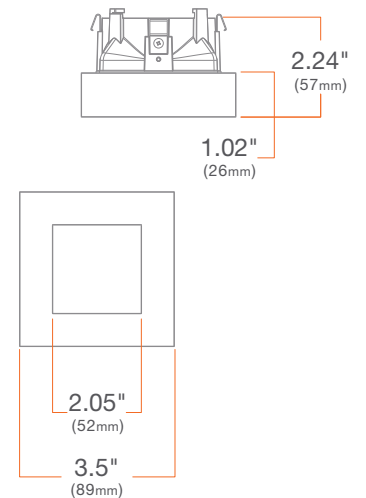
Decorative: Float

X2TSDSWHDF



Decorative: Open

X2TSDSWHDO



## HOUSING



### New Construction **X2NCS** Chicago Plenum **X2CPS**

#### SUMMARY

**JUNCTION BOX:** Equipped with 10 knockouts: four 1/2" trade size knockouts, two 3/4" trade size knockouts, and four romex knockouts. Approved for 8 (four in, four out) #12 AWG 70°C.

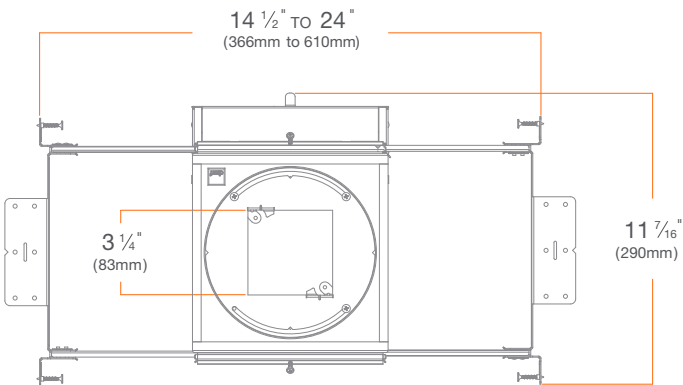
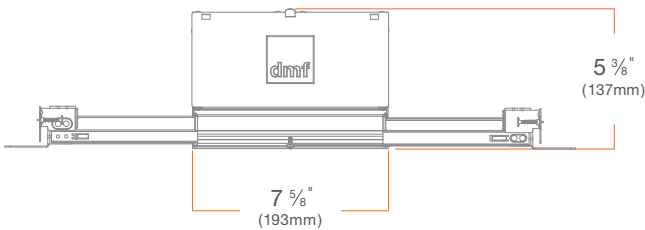
**BAR HANGER MOUNTING:** Adjustable Bar Hangers for 14.5" to 24" joist spacing, when bar hangers are broken down, up to 10.5" of joist spacing. Compatible with traditional joists, Armstrong™ ceiling, Hat Channel and T-Bar. Vertical adjustment (0.5"-1.25") through installation of the square collar.

**CEILING:** 1/2" up to 1 1/4"

**CUTOUT:** 3 1/4" (82mm) square opening

**LISTINGS:** Chicago Plenum, ASTM E283 certified Air Tight, IC (Insulation Contact) up to R-32 for Roll, Batt, and Loose Fill, up to R-60 Spray Foam with standard trims, up to R-32 Spray Foam with other trims

**WARRANTY:** 5 year limited warranty



**HOUSING**



**Remodel**

**X2RMS**

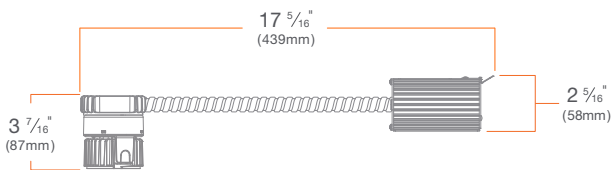
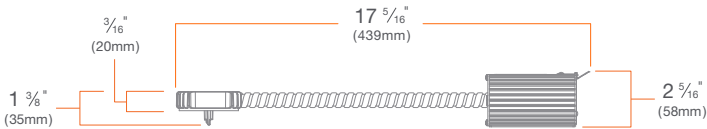
**SUMMARY**

**JUNCTION BOX:** Equipped with four knockouts: two 1/2" trade size knockouts and two romex knockouts. Approved for 8 (four in, four out) #12 AWG 70°C.

**CEILING:** 5/8" up to 1 1/4"

**CUTOUT:** 3 1/4" (82mm) square opening

**WARRANTY:** 5 year limited warranty





**ACCESSORIES**

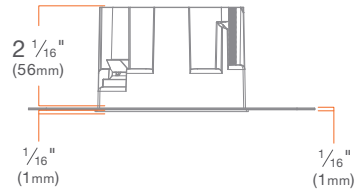
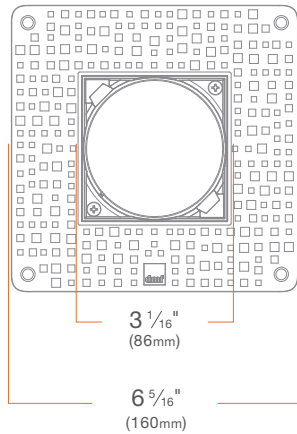


**Flangeless Mud Kit**

**X2KSMUD**

**SUMMARY:** Flangeless Mud Kit (Required for New Construction installation of Flangeless Trim in drywall ceiling)

**CEILING:** 0.5" up to 1.25"

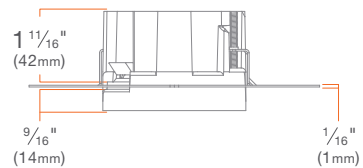
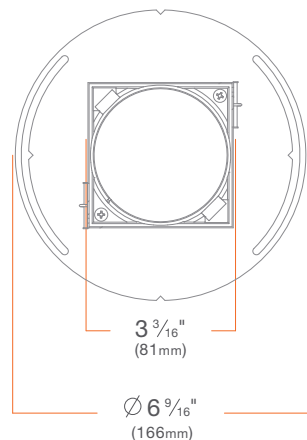


**Wood Kit**

**X2KSWOOD**

**SUMMARY:** Wood Kit (Required for New Construction installation of all trims in wood ceiling. Must be mounted to wood prior to ceiling installation.)

**CEILING:** 0.5" up to 1"



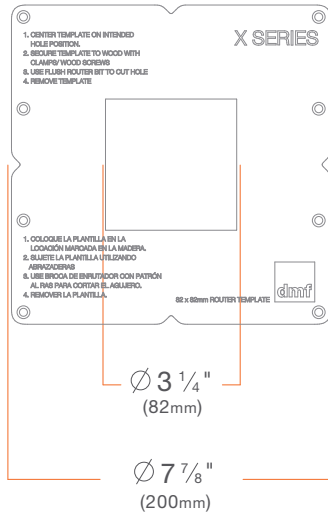
**ACCESSORIES**



**Router Template**

**X2KSTEMPLATE**

**SUMMARY:** Router Template (Recommended for routing 3 1/4" [82mm] cutout in wood ceiling)

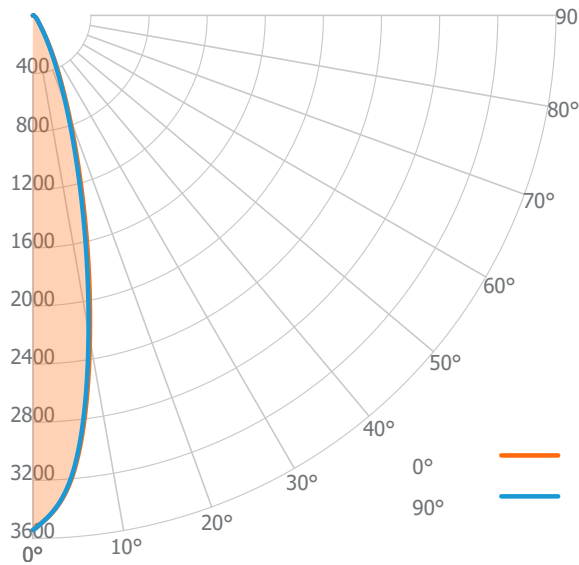


### PHOTOMETRY

1000 lm, 3000K, Narrow Spot **XMD10930NST**

2" Standard White Trim **X2TSDSWH**

Candela Distribution



Luminous Intensity

	0°
0°	3541
5°	3172
10°	2262
15°	1343
20°	728
25°	384
30°	195
35°	104
40°	63
45°	45
50°	33
55°	25
60°	18
65°	11
70°	6
75°	4
80°	2
85°	1
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	755	87%
0° - 40°	811	93%
0° - 60°	857	98%
0° - 90°	871	100%
0° - 180°	871	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	393.5 fc	1.3 ft
6 ft	98.4 fc	2.7 ft
9 ft	43.7 fc	4.0 ft
12 ft	24.6 fc	5.3 ft

Input Watts: **12.3 W**

Lumens: **871 lm**

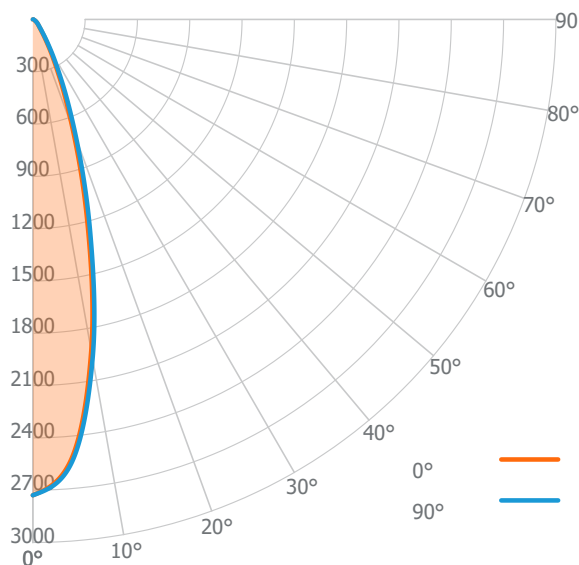
Efficacy: **71 lm/W**

Beam Angle: **25° x 24°**

1000 lm, 3000K, Spot **XMD10930SPT**

2" Standard White Trim **X2TSDSWH**

Candela Distribution



Luminous Intensity

	0°
0°	2729
5°	2532
10°	1930
15°	1213
20°	669
25°	354
30°	185
35°	100
40°	62
45°	45
50°	33
55°	25
60°	18
65°	11
70°	6
75°	3
80°	2
85°	1
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	691	85%
0° - 40°	751	92%
0° - 60°	800	98%
0° - 90°	813	100%
0° - 180°	813	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	303.2 fc	1.5 ft
6 ft	75.8 fc	3.0 ft
9 ft	33.7 fc	4.5 ft
12 ft	19.0 fc	6.0 ft

Input Watts: **12.0 W**

Lumens: **813 lm**

Efficacy: **68 lm/W**

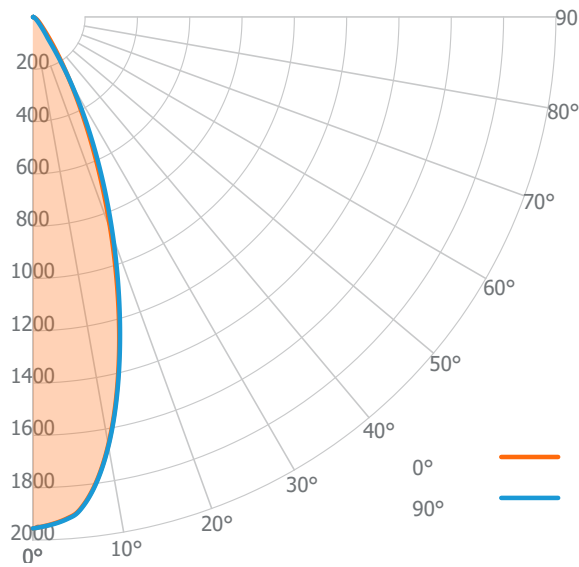
Beam Angle: **28° x 29°**

### PHOTOMETRY

1000 lm, 3000K, Flood **XMD10930FLT**

2" Standard White Trim **X2TSDSWH**

Candela Distribution



Luminous Intensity

Angle	Luminous Intensity (cd)
0°	1956
5°	1905
10°	1662
15°	1277
20°	870
25°	527
30°	286
35°	145
40°	76
45°	46
50°	32
55°	23
60°	16
65°	11
70°	6
75°	3
80°	2
85°	1
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	712	85%
0° - 40°	784	94%
0° - 60°	824	99%
0° - 90°	836	100%
0° - 180°	836	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	217.3 fc	2.0 ft
6 ft	54.3 fc	4.0 ft
9 ft	24.1 fc	6.1 ft
12 ft	13.6 fc	8.1 ft

Input Watts: **12.0 W**

Lumens: **836 lm**

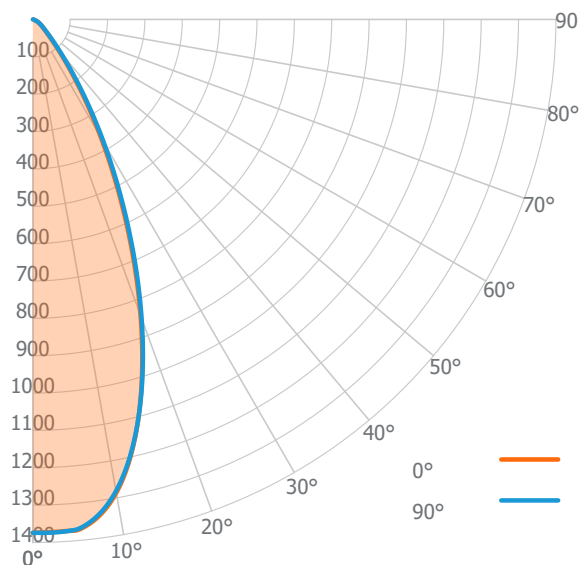
Efficacy: **70 lm/W**

Beam Angle: **37° x 38°**

1000 lm, 3000K, Wide Flood **XMD10930WFT**

2" Standard White Trim **X2TSDSWH**

Candela Distribution



Luminous Intensity

Angle	Luminous Intensity (cd)
0°	1374
5°	1372
10°	1287
15°	1096
20°	843
25°	584
30°	364
35°	203
40°	106
45°	58
50°	38
55°	27
60°	19
65°	13
70°	7
75°	4
80°	3
85°	2
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	643	77%
0° - 40°	756	91%
0° - 60°	818	98%
0° - 90°	835	100%
0° - 180°	835	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	152.7 fc	2.5 ft
6 ft	38.2 fc	5.1 ft
9 ft	17.0 fc	7.6 ft
12 ft	9.5 fc	10.2 ft

Input Watts: **12.0 W**

Lumens: **835 lm**

Efficacy: **70 lm/W**

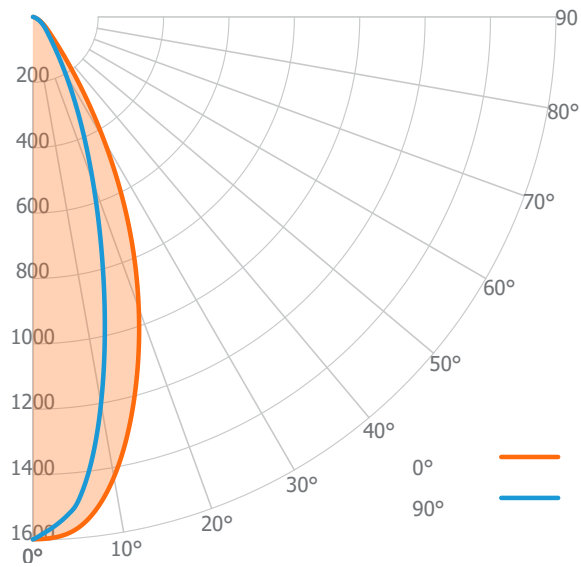
Beam Angle: **46° x 46°**

## PHOTOMETRY

1000 lm, 3000K, Linear Spread **XMD10930LST**

2" Standard White Trim **X2TSDSWH**

Candela Distribution



Luminous Intensity

	0°
0°	1598
5°	1570
10°	1429
15°	1202
20°	947
25°	687
30°	435
35°	242
40°	132
45°	82
50°	57
55°	41
60°	29
65°	19
70°	10
75°	5
80°	3
85°	2
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	603	76%
0° - 40°	702	88%
0° - 60°	775	97%
0° - 90°	796	100%
0° - 180°	796	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	177.6 fc	2.5 ft
6 ft	44.4 fc	5.1 ft
9 ft	19.7 fc	7.6 ft
12 ft	11.1 fc	10.1 ft

Input Watts: **12.0 W**  
 Lumens: **796 lm**  
 Efficacy: **66 lm/W**  
 Beam Angle: **46° x 31°**