

Project:	Type:
Product Code:	Date:

V031725



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

Embedded 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, Acoustic Ceiling Tiles

TRIMS

Style

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

Finish

White, Black, Bronze, Clear Diffuse (Coming Soon), Custom Color (RAL Colors)

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 ¹
-  ASTM E283 Certified Air Tight
-  Chicago Plenum
-  UL Listed for Wet Location ²
-  RoHS Compliant
-  NSF Listed ³
-  DarkSky Approved ⁴

¹ New Construction only; IC for Roll, Batt, Loose Fill and Spray Foam

² Flanged Trims, Under Covered Areas Only

³ White and Black Finish Only

⁴ CCT less than or equal to 3000K, non-decorative trims only

WARRANTY

5 year limited warranty; 50,000 hours





DMF LightSpeed
Our Quickest Shipping Selections are Highlighted for shipping in 2 days or less
All other items qty 100 or less ship in 5 days or less (custom color excluded)

X Series

2" Square Downlight

PRODUCT BUILDER

HOUSING

PRODUCT CODE		INSTALLATION		SHAPE	
X2				S	
X2	2" Housing	NC	New Construction	S	Square
		CP	Chicago Plenum		
		RM	Remodel ¹		

¹ Non-IC installation only; Flanged trims and Micro Flanged trims only; Not available with DALI-2 dimming.

MODULE

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

² DarkSky approved is only applicable to CCT options less than or equal to 3000K and not compatible with Decorative trims

³ Only available with Ultra Narrow Spot beam spread

⁴ Only available in 1000 lm; Not available in Narrow Spot beam spread

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

⁶ Only available in 500 lm, not available as an optical accessory

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

TRIM

PRODUCT CODE		FINISH		OPTION	
X2TSDS	2" Standard Trim ⁸	WH	White	[Blank]	Flanged (Pinhole Only)
X2TSDW	2" Wall Wash Trim ⁹	BK	Black	MF	Micro Flange
X2TSDP	2" Pinhole Trim ¹⁰	BZ	Bronze	FL	Flangeless ¹¹
		CW	Clear Diffuse, White Flange (Coming soon)	DO	Decorative: Open ^{2,12}
		CC	Custom Color (RAL Colors)	DF	Decorative: Float ^{2,12}

⁸ Not available in [Blank] Flanged option

⁹ Only available in Micro Flange or Flangeless Option; Recommended with Wide Flood beam spread; Not available in Bronze finish

¹⁰ Not available in Bronze or Clear Diffuse finish; Only available in [Blank] Flanged or Flangeless option

¹¹ Requires Flangeless Mud or Wood Kit in New Construction housings; Not compatible with Remodel Housing; Not available in Bronze or Clear Diffuse finish

¹² Only available in 750 lm, Standard style, White finish

ACCESSORIES

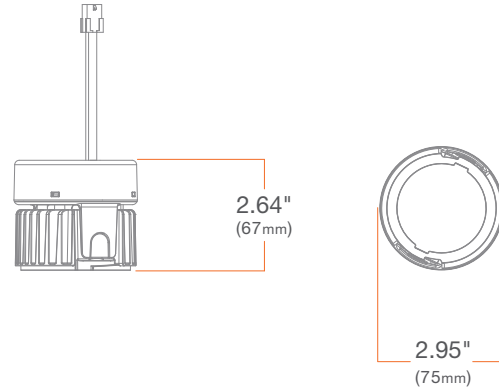
X2KSMUD	Flangeless Mud Kit (Required for New Construction installation of Flangeless Trim in drywall ceiling)
X2KSWOOD	Wood Kit (Required for New Construction installation of all trims in wood ceiling)
X2KSTEMPLATE	Router Template (Recommended for routing 3 1/4" [82mm] cutout in wood ceiling)

PRODUCT BUILDER

OPTICS

DXNS	Narrow Spot (20°) Optic
DXSP	Spot (30°) Optic
DXFL	Flood (40°) Optic
DXWF	Wide Flood (50°) Optic
DXLS	Linear Spread (50°x30°) Optic
DXOP	Bundled Downlight Optics Kit <i>(Includes Narrow Spot, Spot, Flood, Wide Flood and Linear Spread)</i>
DXHD	High Diffusion Front Lens <i>(Can be paired with all beam spreads to provide extra diffusion; Only available as an optical accessory)</i>
DXCL	Clear Front Lens <i>(Can be paired with all beam spreads to decrease diffusion and define edges; Only available as an optical accessory)</i>

MODULE



PERFORMANCE SUMMARY

	STATIC CCT	WARM DIM	TUNABLE WHITE
CCT	2700K, 3000K, 3500K, 4000K	3000K–1800K	4000K–1800K; 6500K–2700K
LUMENS (POWER)	500 lm (9.5W), 750 lm (9.5W), 1000 lm (12.5W), 1250 lm (14.3W), 1500 lm (14.3W)	1000 lm (12.5W)	1000 lm (14.5W)
EFFICACY	53 lm/W, 79 lm/W, 80 lm/W, 87 lm/W, 105 lm/W	80 lm/W	69 lm/W
COLOR QUALITY	93 CRI ¹ , 2-step SDCM	93 CRI ¹ , 3-step SDCM	93 CRI ¹ , 3-step SDCM
BEAM SPREAD	Ultra Narrow Spot (10°), Narrow Spot (20°), Spot (30°), Flood (40°), Wide Flood (50°), Linear Spread (50°x30°)	Spot (30°), Flood (40°), Wide Flood (50°), Linear Spread (50°x30°)	Spot (30°), Flood (40°), Wide Flood (50°), Linear Spread (50°x30°)
DIMMING	0-10V, TRIAC/ELV, DALI-2 ²	0-10V, TRIAC/ELV, DALI-2	DALI-2
LED CHIP	Cree	Bridgelux	Bridgelux
LISTINGS	ENERGY STAR® Qualified ³ , California Title 24 2019–2022 JA8-E compliant, UL Listed for Wet Location ⁴ , UL Certified US-CA, Declare, RoHS compliant, Shatter-resistant construction, DALI-2 Compliant, NSF/ANSI 2 Listed ⁵ , Dark Sky Compliant ⁶ , Compliant with FCC CFR Title 47 Part 15; Class B		

¹ Tested in accordance to IESNA LM-79-2008

² Available in 1250lm only, 14.5W

³ Refer to ENERGY STAR Certified light fixtures database

⁴ With flanged trims, under covered areas only

⁵ In accordance to NSF/ANSI 2 for Splash Zone having designated trim finishes

⁶ 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

MODULE PERFORMANCE

Based on 93 CRI, 3000K Module + Standard Micro Flange Trim, White (X2TSDSWHMF)

(Please refer to IES files for other trim types)

		STATIC CCT					WARM DIM	T1	T2
LED CHIP		CREE 93 CRI					Bridgelux 93 CRI		
SDCM		2-STEP					3-STEP		
PN DESIGNATION		05	07	10	12	15	10	10	10
WATTAGE		9.5W	9.5W	12.5W	14.3W	14.3W	12.5W	14.5W	14.5W
UN	Lumens	477	N/A				N/A		
	LPW ¹	50.2							
	CBCP ²	3239							
	UGR ³	6.5							
NS	Lumens	N/A	669	872	969	1125	N/A		
	LPW		70.4	69.8	67.8	78.7			
	CBCP		2715	3541	3935	4568			
	UGR		9.7	10.6	11.0	11.5			
SP	Lumens	N/A	636	829	921	1069	680	592	699
	LPW		66.9	66.3	64.4	74.8	54.4	40.8	48.2
	CBCP		2092	2729	3032	3521	2237	1570	1853
	UGR		9.8	10.7	11.1	11.6	10.0	12.1	12.7
FL	Lumens	N/A	641	836	929	1078	686	637	758
	LPW		67.5	66.9	65	75.4	54.9	43.9	52.3
	CBCP		1499	1956	2173	2523	1604	1330	1569
	UGR		8.8	9.7	10.1	10.6	9.0	11.2	11.8
WF	Lumens	N/A	640	835	928	1077	695	596	703
	LPW		67.4	66.8	64.9	75.3	55.6	41.1	48.5
	CBCP		1053	1374	1527	1772	1127	1094	1291
	UGR		10.6	11.6	11.9	12.5	10.9	10.3	10.9
LS	Lumens	N/A	610	796	884	1027	653	517	610
	LPW		64	63.7	61.8	71.8	52.2	35.7	42.1
	CBCP		1225	1598	1776	2061	1310	897	1059
	UGR		13.1	14.0	14.4	14.9	13.3	13.4	14.1

CCT MULTIPLIER	STATIC				WARM DIM		T1 TUNABLE WHITE			T2 TUNABLE WHITE		
	2700K	3000K	3500K	4000K	1800K	3000K	1800K	3000K	4000K	2700K	3000K	6500K
	0.93	1	1.05	1.07	0.05	1	0.7	1	1.12	0.96	1	1.07

¹ LPW: Lumens per watt

² CBCP: Center beam candlepower

³ UGR: Unified glare ratio (0.7/0.5/0.2, 4H/8H)

HOUSING



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

SUMMARY

JUNCTION BOX: Equipped with 10 knockouts: four 0.5" trade size knockouts, two 0.75" trade size knockouts, and four romex knockouts. Approved for 8 (four in, four out) #12 AWG 70°C.

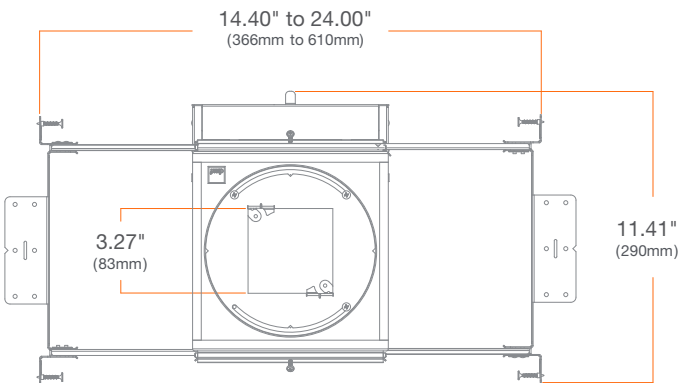
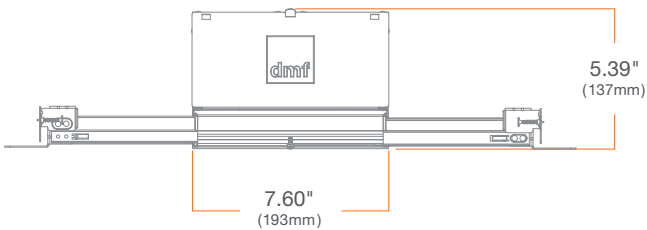
BAR HANGER MOUNTING: Adjustable Bar Hangers for 14.5" to 24" joist spacing, when bar hangers are broken down, up to 10.5" of joist spacing. Compatible with traditional joists, Armstrong™ ceiling, Hat Channel and T-Bar. Vertical adjustment (0.5"-1.25") through installation of the square collar. Front plate can be adjusted by 90°.

CEILING: 1/2" - 1 1/4" (12mm-32mm)

CUTOUT: 3.25" (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

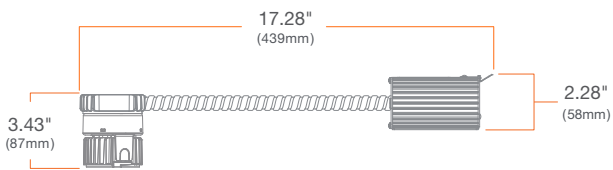
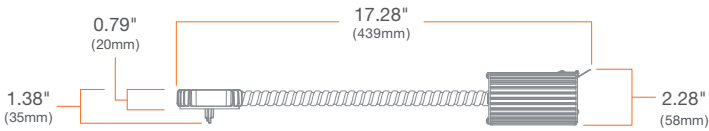
SUMMARY

JUNCTION BOX: Equipped with four knockouts: two 0.5" trade size knockouts and two romex knockouts. Approved for 8 (four in, four out) #12 AWG 70°C.

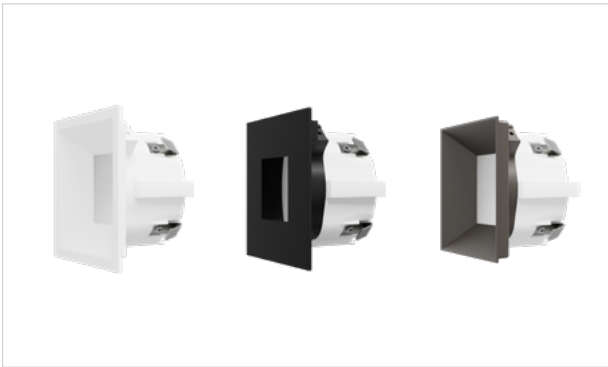
CEILING: Drywall: 1/2" - 1 1/4" (12mm-32mm)
Wood Ceiling: 1/2" - 1" (12mm-25mm)
Acoustic Ceiling Tiles: 5/8" - 1 1/4" (16mm-32mm)

CUTOUT: 3.25" (82mm) square opening

WARRANTY: 5 year limited warranty



TRIMS



SUMMARY

CONSTRUCTION: Die-cast aluminum

FINISH: Wet paint

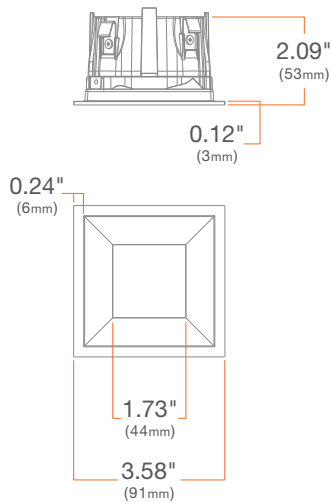
DECORATIVE: Acrylic diffuser

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

WARRANTY: 5 year limited warranty

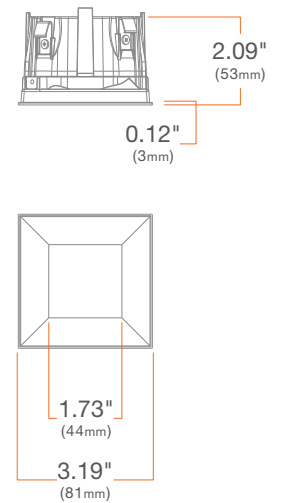
Standard Micro Flange

X2TSDSWHMF



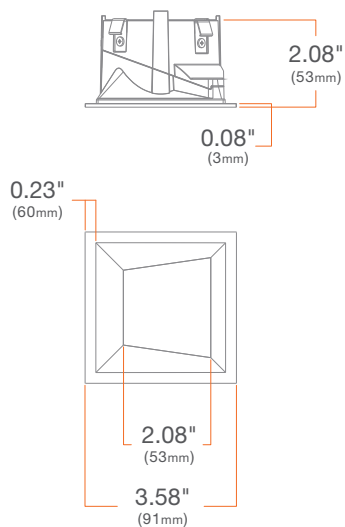
Standard Flangeless

X2TSDSWHFL



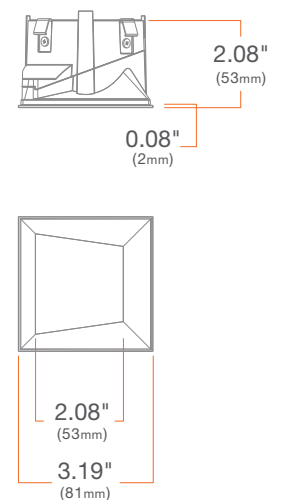
Wall Wash Micro Flange

X2TSDWWHMF



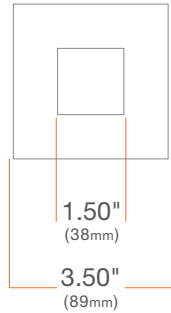
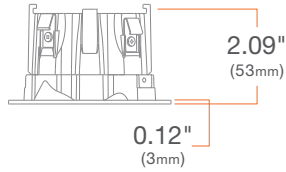
Wall Wash Flangeless

X2TSDWWHFL



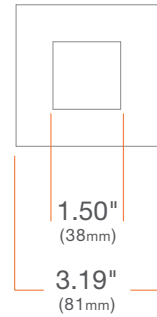
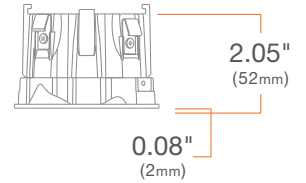
Pinhole

X2TSDPWH



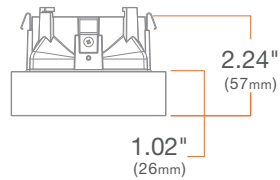
Pinhole Flangeless

X2TSDPWHFL



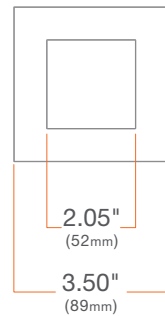
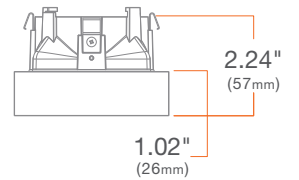
Decorative: Float

X2TSDSWHDF



Decorative: Open

X2TSDSWHDO



ACCESSORIES

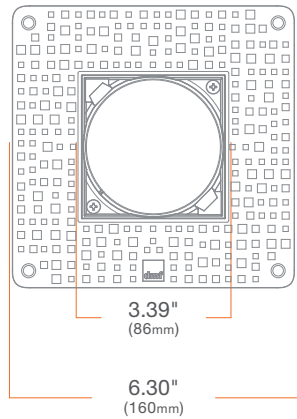


Flangeless Mud Kit

X2KSMUD

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

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

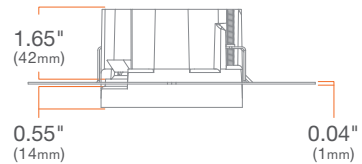
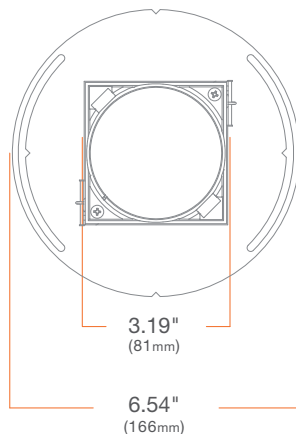


Wood Kit

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: 1/2" up to 1"



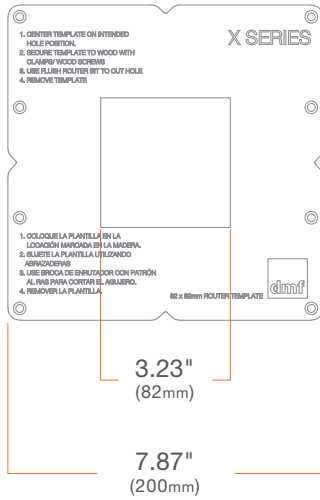
ACCESSORIES



Router Template

X2KSTEMPLATE

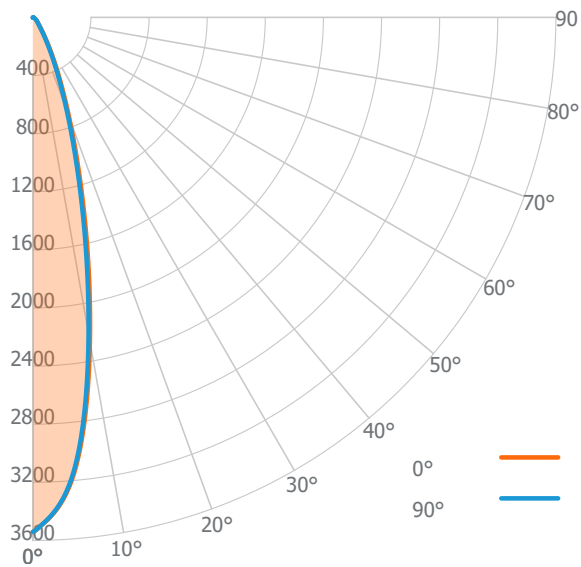
SUMMARY: Router Template (Recommended for routing 3 1/4" [82mm] cutout in wood ceiling)



PHOTOMETRY

1000 lm, 3000K, Narrow Spot **XMD10930NST**
 2" Standard Micro Flange Trim, White **X2TSDSWHMF**

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°	872	100%
0° - 180°	872	100%

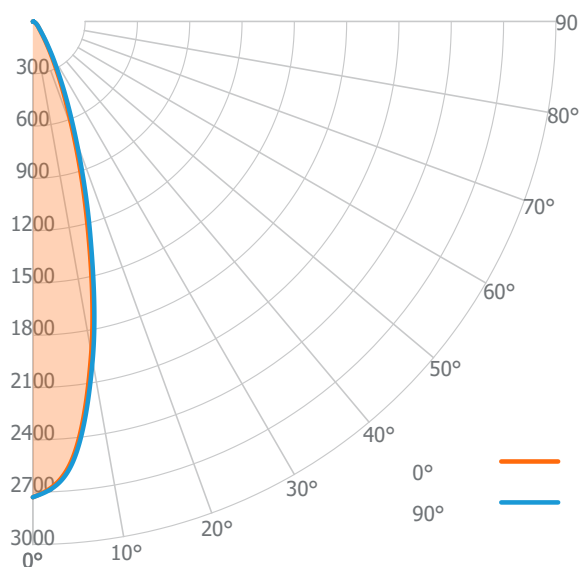
Illuminance Chart

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: **12.5 W**
 Lumens: **872 lm**
 Efficacy: **70 lm/W**
 Beam Angle: **25° x 24°**

1000 lm, 3000K, Spot **XMD10930SPT**
 2" Standard Micro Flange Trim, White **X2TSDSWHMF**

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

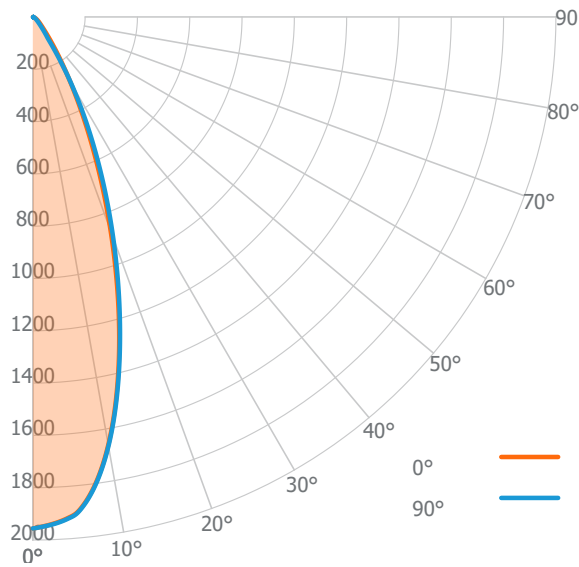
Distance from LED	Foot Candles	Diameter
3 ft	303.2 fc	1.5 ft
6 ft	75.8 fc	3.0 ft
9 ft	33.7 fc	4.5 ft
12 ft	19.0 fc	6.0 ft

Input Watts: **12.5 W**
 Lumens: **813 lm**
 Efficacy: **65 lm/W**
 Beam Angle: **28° x 29°**

PHOTOMETRY

1000 lm, 3000K, Flood **XMD10930FLT**
 2" Standard Micro Flange Trim, White **X2TSDSWHMF**

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%

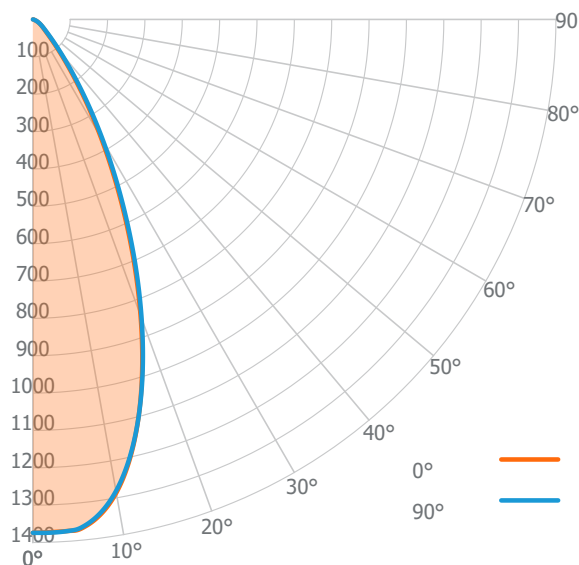
Illuminance Chart

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: **12.5 W**
 Lumens: **836 lm**
 Efficacy: **67 lm/W**
 Beam Angle: **37° x 38°**

1000 lm, 3000K, Wide Flood **XMD10930WFT**
 2" Standard Micro Flange Trim, White **X2TSDSWHMF**

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

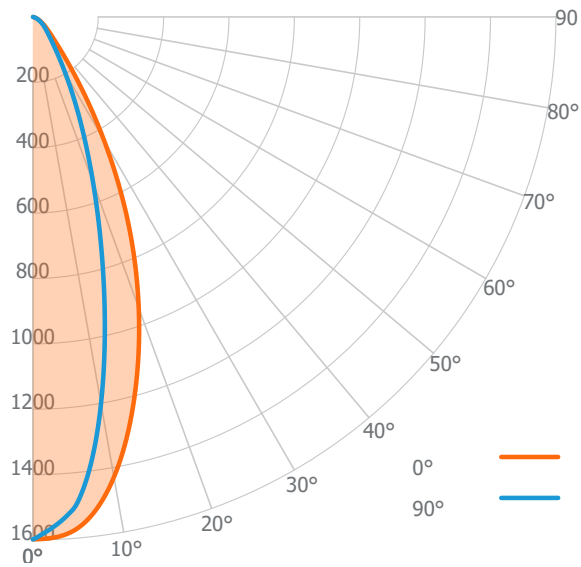
Input Watts: **12.5 W**
 Lumens: **835 lm**
 Efficacy: **67 lm/W**
 Beam Angle: **46° x 46°**

PHOTOMETRY

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

2" Standard Micro Flange Trim, White **X2TSDSWHMF**

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: **12.5 W**
 Lumens: **796 lm**
 Efficacy: **64 lm/W**
 Beam Angle: **46° x 31°**