

Project:	Type:
Product Code:	Date:

V031725



2" Round 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: 1/2" up to 1 1/4"
Extension Collar: 1 1/4" up to 3"

Ceiling Material

Drywall, Millwork, Acoustic Ceiling Tiles

TRIMS

Style

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

Finish

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

SPECIALTY LENS

Hexcell Louver

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° x 30°)

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



PRODUCT BUILDER

HOUSING

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

¹ Non-IC installation only; Flanged 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 ⁸
		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	UH	Ultra Narrow Spot Hexcell Louver ⁶		
								NH	Narrow Spot Hexcell Louver ⁷		
								SH	Spot Hexcell Louver ⁷		
								FH	Flood Hexcell Louver ⁷		
								WH	Wide Flood Hexcell Louver ⁷		

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

³ Only available with Ultra Narrow Spot or Ultra Narrow Spot Hexcell Louver 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 or with Hexcell Louvers

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

⁷ Not available for 1250 lm, 1500 lm or DALI-2 modules

⁸ Only available in 1000 lm with Tunable White CCT, 1000 lm Warm Dim or 1250 lm with static CCT

TRIM

PRODUCT CODE		FINISH		OPTION	
X2TRDS	2" Standard Trim ⁹	WH	White	[Blank]	Flanged (Pinhole or Hyperbolic Only)
X2TRDW	2" Wall Wash ¹⁰	BK	Black	MF	Micro Flange
X2TRDP	2" Pinhole Trim ¹¹	BZ	Bronze	FL	Flangeless ¹²
X2TRDH	2" Hyperbolic Trim ¹¹	CW	Clear Diffuse, White Flange <i>(Coming soon)</i>	DO	Decorative: Open ^{2,13}
		CC	Custom Color (RAL Colors)	DH	Decorative: Hyperbolic ^{2,13}

⁹ Not available in [Blank] Flanged option

¹⁰ Only available in Micro Flange or Flangeless Option; Recommended with Wide Flood beam spread; Not available in Bronze finish

¹¹ Not available in Clear Diffuse or Bronze finish; Only available with [Blank] or Flangeless Option

¹² Requires Flangeless Mud or Wood Kit in New Construction housings; Not compatible with Remodel Housing; Not available in Clear Diffuse finish

¹³ Only available in 750 lm, Standard style, White finish

FLANGELESS ACCESSORIES

X2KRMUD	Flangeless Mud Kit <i>(Required for New Construction installation of Flangeless trim in drywall ceiling)</i>
X2KRWOOD	Wood Kit <i>(Required for New Construction installation of all trims in wood ceiling)</i>
X2KRWOODXL	Wood Extension Collar <i>(New Construction only, for ceilings up to 3")</i>

PRODUCT BUILDER

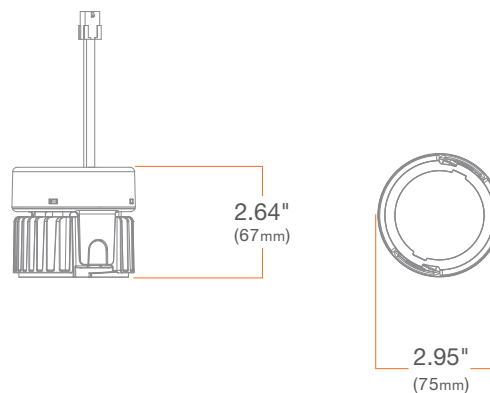
OPTICS

XXNS	Narrow Spot (20°) Optic
XXSP	Spot (30°) Optic
XXFL	Flood (40°) Optic
XXWF	Wide Flood (50°) Optic
XXLS	Linear Spread (50°x30°) Optic
XXNH	Narrow Spot Optic with Hexcell Louver
XXOP	Bundled Downlight Optics Kit <i>(Includes Narrow Spot, Spot, Flood, Wide Flood and Linear Spread)</i>
XXSH	Spot Optic with Hexcell Louver
XXFH	Flood Optic with Hexcell Louver
XXWH	Wide Flood Optic with Hexcell Louver
XXHD	High Diffusion Front Lens <i>(Can be paired with all beam spreads to provide extra diffusion; Only available as an optical accessory)</i>
XXCL	Clear Front Lens <i>(Can be paired with all beam spreads to decrease diffusion and define edges; Only available as an optical accessory)</i>

ACCESSORIES

X2KRMUD	Flangeless Mud Kit <i>(Required for New Construction installation of flangeless trim in drywall ceiling)</i>
X2KRWOOD	Wood Kit <i>(Required for New Construction installation of all trims in wood ceiling)</i>
X2KRTEMPLATE	Router Template <i>(Recommended for routing 3 3/16" [81mm] cutout in wood ceiling)</i>
X2CREXT	Drywall Extension Collar <i>(New Construction only, for ceilings up to 3")</i>
X2KRWOODXL	Wood Extension Collar <i>(New Construction only, for ceilings up to 3")</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 ⁶ , 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-79-2008² Available in 1250lm only, 14.5W³ Refer to ENERGY STAR Certified light fixtures database⁴ With flanged trims, under covered areas only⁵ In accordance to NSF/ANSI 2 for Splash Zone having designated trim finishes⁶ 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

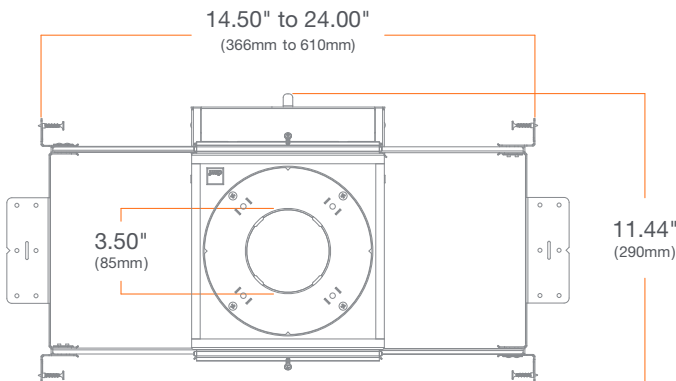
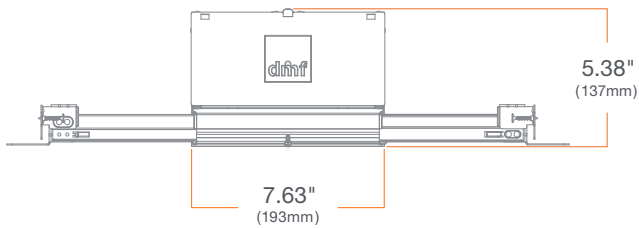
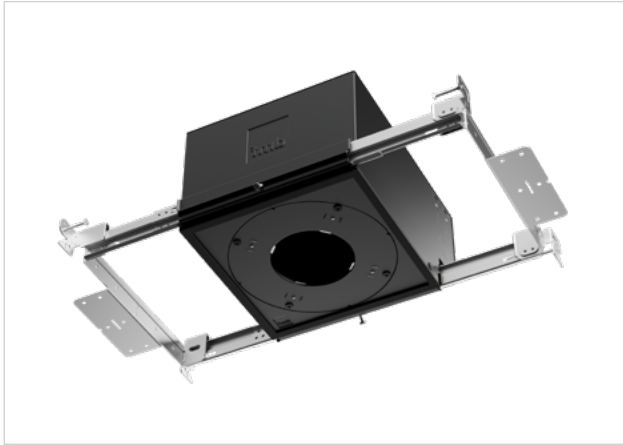
Based on 93 CRI, 3000K Module + Standard Micro Flange Trim, White (X2TRDSWHMF)
(Please refer to IES files for other trim types)

		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	585	N/A				N/A		
	LPW ¹	61.6							
	CBCP ²	7610							
	UGR ³	10.7							
NS	Lumens	N/A	843	1099	1221	1418			
	LPW		88.7	87.9	85.4	99.2			
	CBCP		4005	5224	5804	6738			
	UGR		13.5	14.4	14.8	15.3			
SP	Lumens	N/A	801	1045	1161	1348	857	840	991
	LPW		84.3	83.6	81.2	94.3	68.6	57.9	68.3
	CBCP		2730	3560	3956	4593	2520	2053	2422
	UGR		13.9	14.9	15.2	15.7	14.2	16.8	15.9
FL	Lumens	N/A	813	1061	1179	1369	870	842	994
	LPW		85.6	84.9	82.4	95.7	69.6	58.1	68.6
	CBCP		1755	2289	2543	2953	1877	1587	1873
	UGR		13.9	14.8	15.2	15.7	14.2	16	15.2
WF	Lumens	N/A	807	1052	1169	1357	863	825	974
	LPW		84.9	84.2	81.7	94.9	69	56.9	67.1
	CBCP		1120	1461	1623	1885	1198	1296	1529
	UGR		15.6	16.5	16.9	17.4	15.8	14.9	16.8
LS	Lumens	N/A	769	1003	1146	1294	822	802	946
	LPW		80.9	80.2	80.1	90.6	65.8	55.3	65.2
	CBCP		1343	1751	1946	2259	1436	1135	1339
	UGR		16.3	17.2	17.6	18.1	16.6	18.5	20.4

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

HEXCELL LOUVER MULTIPLIER	0.6	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 **X2NCR** Chicago Plenum **X2CPR**

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.

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 TM ceiling, Hat Channel and T-Bar. Vertical adjustment (0.5"-1.25") through installation of the round collar.

CEILING: Collar allows for vertical adjustment from 1/2" up to 1 1/4" in the ceiling

CUTOUT: 3.25" (82mm) round 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 beveled trims, up to R-32 Spray Foam with other trims or Hexcell Louver.

WARRANTY: 5 year limited warranty

HOUSING



Remodel

X2RMR

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:

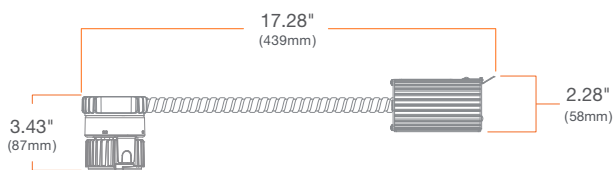
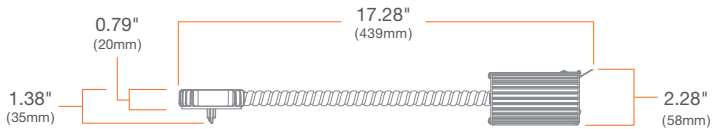
Drywall: 1/2" - 1 1/4" (12mm-32mm)

Wood Ceiling: 1/2" - 1" (12mm-25mm)

Acoustic Ceiling Tiles: 5/8" - 1 1/4" (16mm-32mm)

CUTOUT: 3.25" (82mm) round opening

WARRANTY: 5 year limited warranty



TRIMS



SUMMARY

CONSTRUCTION: Die-cast aluminum

FINISH: Wet paint

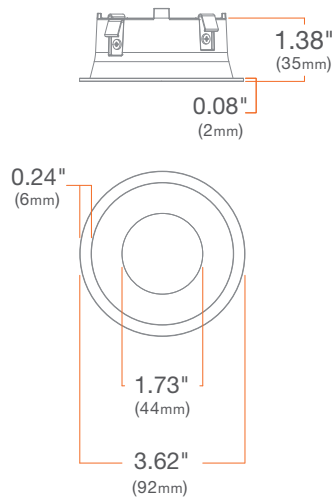
DECORATIVE: Acrylic diffuser

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

WARRANTY: 5 year limited warranty

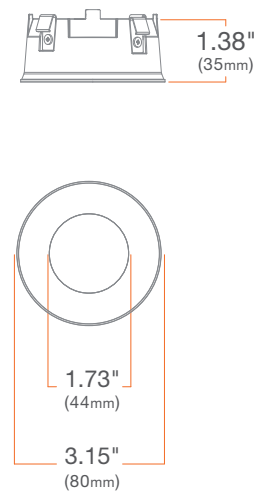
Standard Micro Flange

X2TRDSWHMF



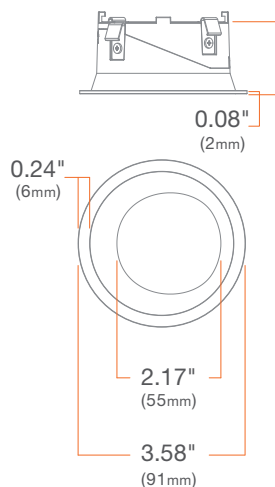
Standard Flangeless

X2TRDSWHFL



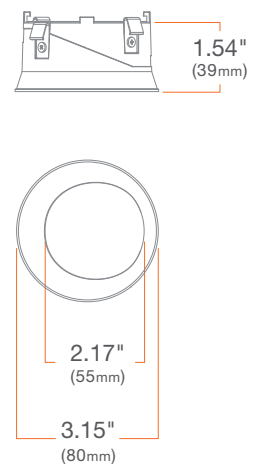
Wall Wash Micro Flange

X2TRDWWHMF



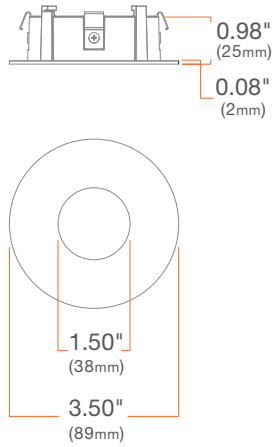
Wall Wash Flangeless

X2TRDWWHFL



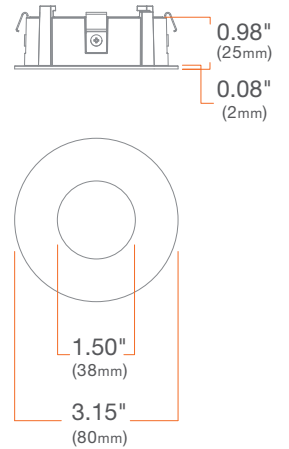
Pinhole

X2TRDPWH



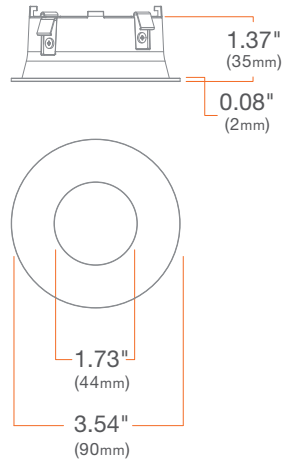
Pinhole Flangeless

X2TRDPWHFL



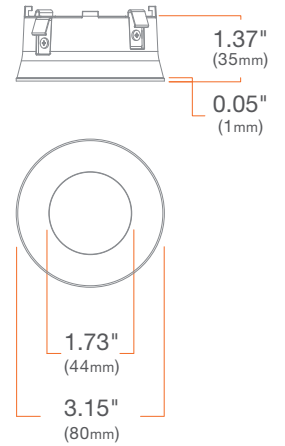
Hyperbolic

X2TRDWH



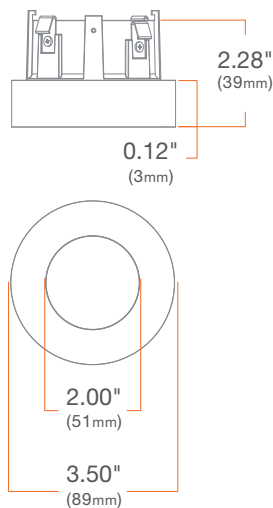
Hyperbolic Flangeless

X2TRDWHFL



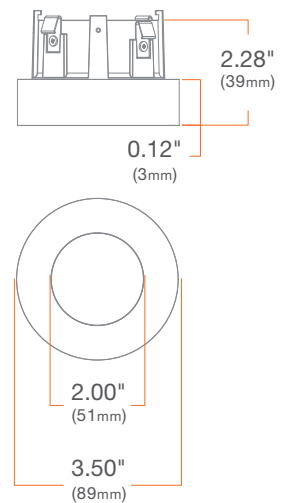
Decorative: Open

X2TRDSWHD



Decorative: Hyperbolic

X2TRDSWHDH



ACCESSORIES

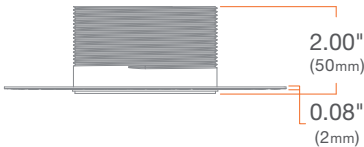
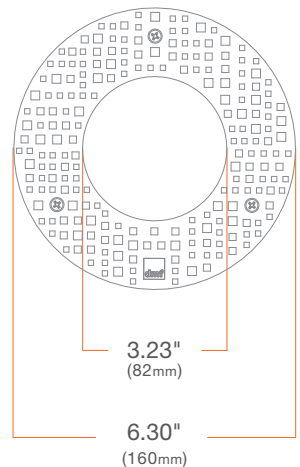


Flangeless Mud Kit

X2KRMUD

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

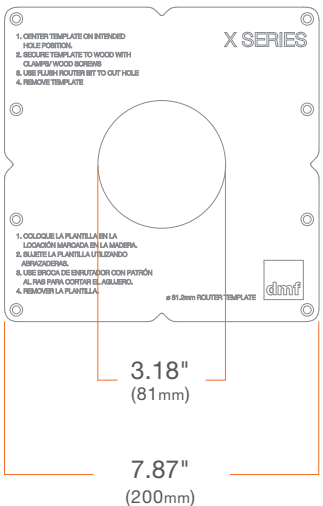
CEILING: 1/2" up to 1 1/4"



Router Template

X2KRTEMPLATE

SUMMARY: Router Template (Recommended for routing 3 3/16" [81mm] cutout in wood ceiling)



ACCESSORIES

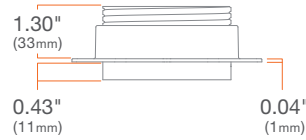
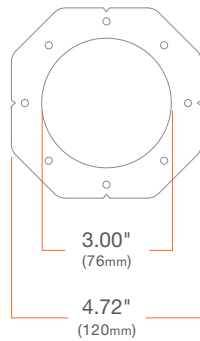


Wood Kit

X2KRWOOD

SUMMARY: Wood Kit (Required for New Construction installation in wood ceiling. Must be mounted on wood before installation to ceiling.)

CEILING: 1/2" up to 1"

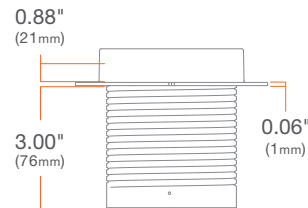
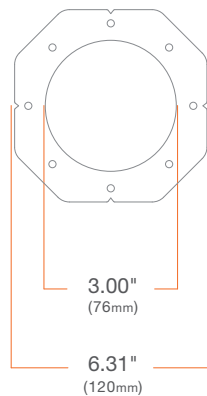


Wood Extension Collar

X2KRWOODXL

SUMMARY: Extension Collar for wood ceiling (Must be mounted on the wood prior to ceiling installation.)

CEILING: 1/2" up to 3"



ACCESSORIES

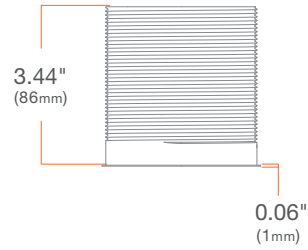
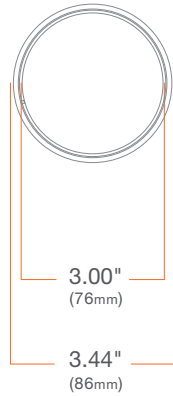


Extension Collar

X2CREXT

SUMMARY: Extension Collar for drywall ceiling with flanged trims

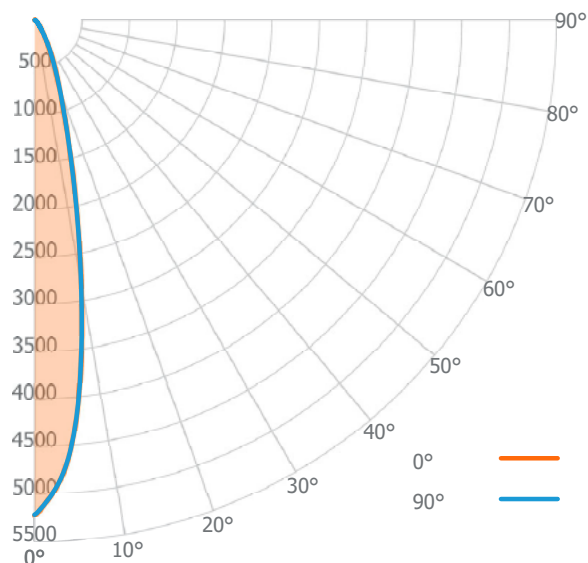
CEILING: 1/2" up to 3"



PHOTOMETRY

1000 lm, 3000K, Narrow Spot **XMD10930NST**2" Standard Micro Flange Trim, White **X2TRDSWHMF**

Candela Distribution



Luminous Intensity

	0°
0°	5224
5°	4500
10°	2835
15°	1452
20°	770
25°	443
30°	246
35°	136
40°	81
45°	54
50°	39
55°	28
60°	22
65°	17
70°	13
75°	9
80°	6
85°	3
90°	1

Zonal Lumen Summary

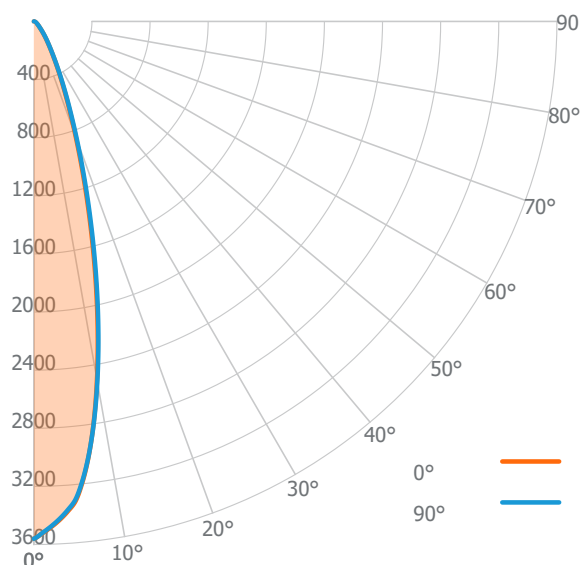
Zone	Lumens	Luminaire %
0° - 30°	939	86%
0° - 40°	1015	92%
0° - 60°	1073	98%
0° - 90°	1098	100%
0° - 180°	1098	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	580.4 fc	1.1 ft
6 ft	145.1 fc	2.3 ft
9 ft	64.5 fc	3.4 ft
12 ft	36.3 fc	4.5 ft

Input Watts: **12.5 W**Lumens: **1098 lm**Efficacy: **88 lm/W**Beam Angle: **21°**1000 lm, 3000K, Spot **XMD10930SPT**2" Standard Micro Flange Trim, White **X2TRDSWHMF**

Candela Distribution



Luminous Intensity

	0°
0°	3560
5°	3311
10°	2504
15°	1547
20°	844
25°	455
30°	253
35°	149
40°	89
45°	56
50°	39
55°	28
60°	22
65°	17
70°	12
75°	9
80°	6
85°	3
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	876	84%
0° - 40°	960	92%
0° - 60°	1019	98%
0° - 90°	1044	100%
0° - 180°	1044	100%

Illuminance Chart

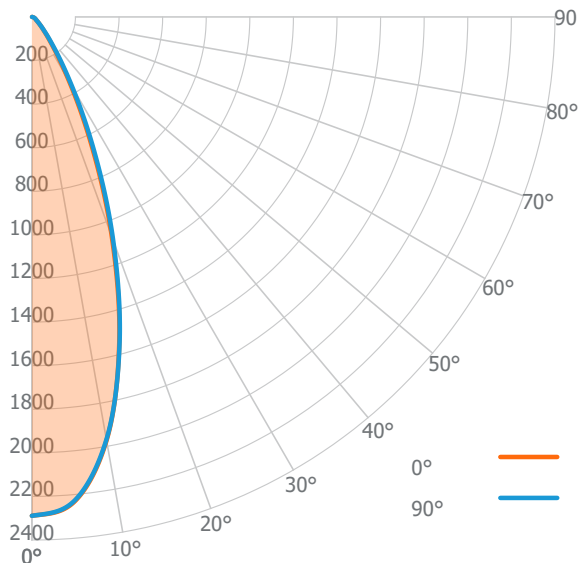
Distance from LED	Foot Candles	Diameter
3 ft	395.6 fc	1.5 ft
6 ft	98.9 fc	2.9 ft
9 ft	44.0 fc	4.4 ft
12 ft	24.7 fc	5.9 ft

Input Watts: **12.5 W**Lumens: **1044 lm**Efficacy: **84 lm/W**Beam Angle: **27° x 28°**

PHOTOMETRY

1000 lm, 3000K, Flood **XMD10930FLT**
 2" Standard Micro Flange Trim, White **X2TRDSWHMF**

Candela Distribution



Luminous Intensity

	0°
0°	2289
5°	2233
10°	1973
15°	1549
20°	1073
25°	645
30°	345
35°	178
40°	96
45°	57
50°	36
55°	24
60°	19
65°	15
70°	11
75°	8
80°	5
85°	3
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	860	82%
0° - 40°	967	92%
0° - 60°	1026	98%
0° - 90°	1048	100%
0° - 180°	1048	100%

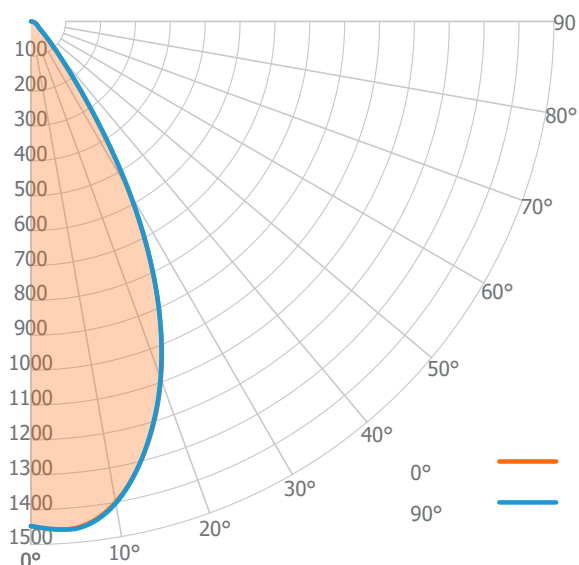
Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	254.3 fc	2.1 ft
6 ft	63.6 fc	4.2 ft
9 ft	28.3 fc	6.3 ft
12 ft	15.9 fc	8.4 ft

Input Watts: **12.5 W**
 Lumens: **1048 lm**
 Efficacy: **84 lm/W**
 Beam Angle: **38° x 39°**

1000 lm, 3000K, Wide Flood **XMD10930WFT**
 2" Standard Micro Flange Trim, White **X2TRDSWHMF**

Candela Distribution



Luminous Intensity

	0°
0°	1447
5°	1459
10°	1400
15°	1271
20°	1090
25°	851
30°	562
35°	276
40°	122
45°	60
50°	35
55°	26
60°	21
65°	17
70°	13
75°	10
80°	6
85°	3
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	806	77%
0° - 40°	963	92%
0° - 60°	1025	98%
0° - 90°	1052	100%
0° - 180°	1052	100%

Illuminance Chart

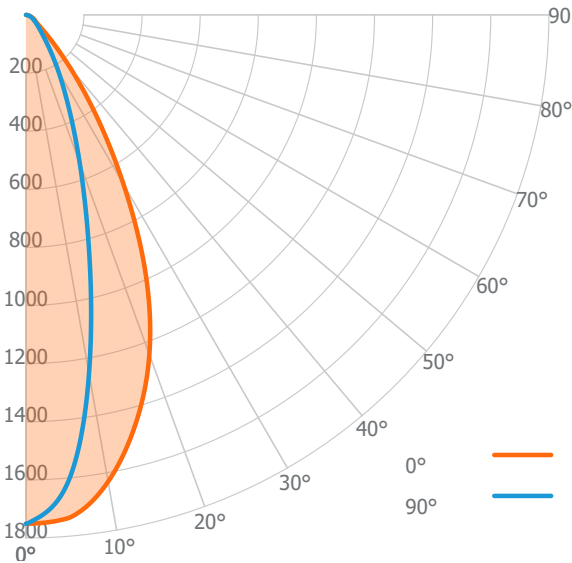
Distance from LED	Foot Candles	Diameter
3 ft	160.8 fc	3.1 ft
6 ft	40.2 fc	6.2 ft
9 ft	17.9 fc	9.2 ft
12 ft	10.1 fc	12.3 ft

Input Watts: **12.5 W**
 Lumens: **1052 lm**
 Efficacy: **84 lm/W**
 Beam Angle: **54° x 54°**

PHOTOMETRY

1000 lm, 3000K, Linear Spread **XMD10930LST**
2" Standard Micro Flange Trim, White **X2TRDSWHMF**

Candela Distribution



Luminous Intensity

	0°
0°	1751
5°	1736
10°	1631
15°	1458
20°	1243
25°	972
30°	672
35°	422
40°	238
45°	124
50°	68
55°	45
60°	37
65°	29
70°	22
75°	15
80°	9
85°	5
90°	1

Zonal Lumen Summary

Zone	Lumens	Luminaire %
0° - 30°	717	72%
0° - 40°	870	87%
0° - 60°	965	96%
0° - 90°	1003	100%
0° - 180°	1003	100%

Illuminance Chart

Distance from LED	Foot Candles	Diameter
3 ft	194.6 fc	3.0 ft
6 ft	48.6 fc	6.0 ft
9 ft	21.6 fc	9.0 ft
12 ft	12.2 fc	12.0 ft

Input Watts: 12.5 W
Lumens: 1003 lm
Efficacy: 80 lm/W
Beam Angle: 53° x 29°