

# Concerto LED - LD3D

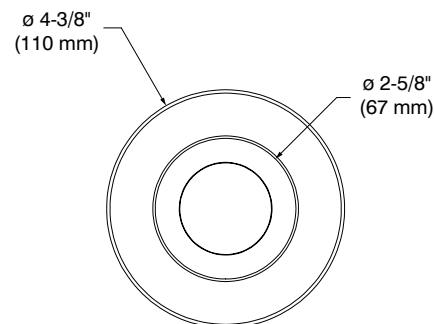
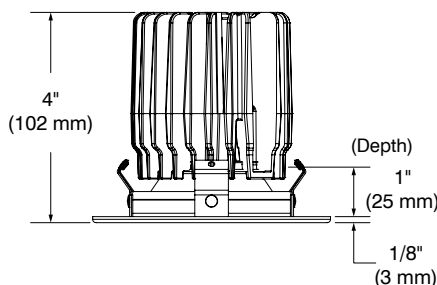
3-1/2" Series

Project	
Notes	
Fixture Type	
Date	

## Low Profile Round Regressed Trim



LD3DC-05CL  
(illustrated)



### DESCRIPTION

This series of fixed round or square trims offered with narrow flood or flood beam will be highly appreciated in the following applications: highlight of various objects in shows and museums or for certain tasks such as above a work table, for kids homework, kitchen island, sewing, etc...

### SPECIFICATIONS

COLOR TEMPERATURES	2,700K, 3,000K, 3,500K and 4,000K
CRI	80 +                      90 + (only at 3,000K)
POWER SUPPLY	Several driver models available giving you 3 dimming options: ELV, 0-10V or Pulse Width Modulation (PWM).
LED MODULE	Bridgelux Vero 18, delivers a lumen maintenance greater than 70% after 50,000 hours of operation ( $L_{70}$ ). Provides a high quality true color and a clean white light without hot spots. Binning within 3 steps on MacAdam ellipse.  CREE CXA2530 delivers a lumen maintenance greater than 70% after 50,000 hours of operation ( $L_{70}$ ). Provides a high quality true color and a clean white light without hot spots. Binning within 4 steps on MacAdam ellipse. Both modules surpass ANSI binning requirements.
DELIVERED LUMENS (Determined by the choice of housing)	<b>Performance 1:</b> 1,060 lumens, 66 lm/W <b>Performance 2:</b> 1,370 lumens, 63 lm/W <b>Performance 3:</b> 1,850 lumens, 63 lm/W
TRIM	Powder coated paint or plated die-formed steel. Different finishes available. Painted finishes available with Marine Grade option.
OPTIC SYSTEM	Interchangeable optional optical reflectors and lenses available to personalize your lighting. Protection lens covered with a high-performance film 98% effective. Lens of 1/8" (3 mm) thick and 1.9" (47 mm) Ø.  <b>Choice of available lenses:</b> Clear (C), Frosted (F), Honeycomb (H), Linear (L), Prismatic (P) and Solite (S)  <b>Optical reflectors available:</b> <b>M:</b> Narrow Flood → 33° <b>W:</b> Flood → 48°
HEAT SINK	High quality aluminum injected heat sink ensuring maximum heat dissipation.



# Concerto LED - LD3D

## 3-1/2" Series

### SPECIFICATIONS (CONT'D)

REFLECTORS	<b>Anodized</b> Anodized Aluminum <b>(AN)</b>	<b>Specular</b> Clear <b>(CL)</b> Black <b>(BK)</b>	<b>Painted</b> White <b>(01)*</b> Black <b>(02)</b> Architectural Bronze <b>(05)*</b> Antique Copper <b>(06)*</b> Matte White <b>(11)*</b> Metallic Grey <b>(15)*</b>
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\*These reflector colors are available only with the same trim color.

CEILING CUTOUT **ø 3-5/8" (92 mm)**

### COMPATIBLE HOUSINGS

(Performance 2 trims work with either performance 1 and 2 housings.)

(Performance 3 trims works only with performance 3 housings.)

	<b>Remodel Housing</b>	<b>New Construction Housing</b>	<b>Insulated Housing</b>
<b>Performance 1</b> (1,500 lumens)	RELD300LE1 RELD300LD1 RELD300LA1	NWLD300LE1 NWLD300LD1 NWLD300LA1	ISLD300LE1 ISLD300LD1 ISLD300LA1
<b>Performance 2</b> (2,000 lumens)	RELD300LE2 RELD300LD2 RELD300LA2	NWLD300LE2 NWLD300LD2 NWLD300LA2	ISLD300LE2 ISLD300LD2 ISLD300LA2
<b>Performance 3</b> (2,500 lumens)	Not Available	NWLD300LD3 NWLD300LA3	Not Available

For dimming, please refer to the selected housing specification sheet.

CERTIFICATION cULus **E343977** for **damp locations**.

WARRANTY 1 year for standard finishes, 2 years on "Marine Grade" finish and 5 years on LED module.



# CONTRASTE

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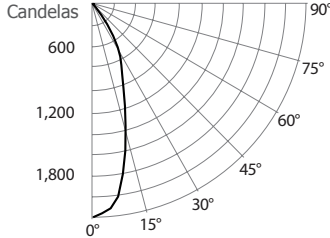
# Concerto LED - LD3D

3-1/2" Series

## PHOTOMETRIC DATA

### 3,000K, 80 + of CRI, Narrow Flood with performance 1 housing

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	59.0	3.8'
08'	33.2	5.1'
10'	21.2	6.3'
12'	14.7	7.6'
14'	10.8	8.9'
16'	8.3	10.1'

Beam: 35°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 1 LED	3,000K	Narrow Flood
CBCP / Lumens	2,123	/ 1,040
Watts	120V	277V
	15.9W	16.4W
Operating AMPS	0.13A	0.059A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	65	
Spacing Criteria	0.6	
Certificate LM79-08	475903	

#### COEFFICIENT OF UTILIZATION - %

Ceiling Reflect %	80	50	30				
Wall Reflect %	50	30	50	30	50	30	
RCR	0	119	119	111	111	106	106
	2	107	104	102	100	99	97
	4	98	94	95	91	93	90
	6	90	86	88	84	87	84
	8	83	79	82	78	81	77
	10	77	72	76	72	75	71

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	846	81.34%
0-40	1,002	96.41%
0-60	1,025	98.56%
60-90	15	1.44%
0-90	1,040	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	51	0.71
6'	28	0.4
7'	20	0.28
8'	20	0.28
9'	13	0.18

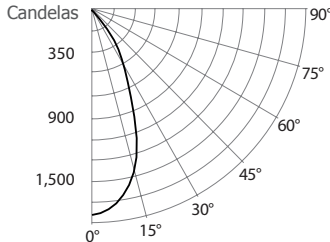
Local 38' x 38' x 10'. Workplan located 2 1/2' (30°).  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	2,123	45	14
5	2,044	55	8
10	1,723	65	5
15	1,265	75	6
20	894	85	6
25	672	90	0
35	250		

### 3,000K, 80 + of CRI, Flood with performance 1 housing

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	47.8	5.1'
08'	26.9	6.8'
10'	17.2	8.5'
12'	12.0	10.2'
14'	8.8	11.9'
16'	6.7	13.5'

Beam: 46°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 1 LED	3,000K	Flood
CBCP / Lumens	1,722	/ 1,056
Watts	120V	277V
	16.1W	16.6W
Operating AMPS	0.19A	0.059A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	66	
Spacing Criteria	0.7	
Certificate LM79-08	Based on test 475906	

#### COEFFICIENT OF UTILIZATION - %

Ceiling Reflect %	80	50	30				
Wall Reflect %	50	30	50	30	50	30	
RCR	0	119	119	111	111	106	106
	2	104	100	99	96	96	94
	4	92	87	89	85	87	83
	6	82	77	80	76	79	75
	8	74	69	73	68	72	68
	10	68	62	66	62	66	61

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	859	81.3%
0-40	1,018	96.3%
0-60	1,042	98.5%
60-90	15	1.5%
0-90	1,056	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	51	0.71
6'	29	0.4
7'	20	0.28
8'	20	0.28
9'	13	0.18

Local 38' x 38' x 10'. Workplan located 2 1/2' (30°).  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	1,722	45	16
5	1,683	55	8
10	1,544	65	5
15	1,326	75	6
20	1,055	85	6
25	726	90	0
35	254		

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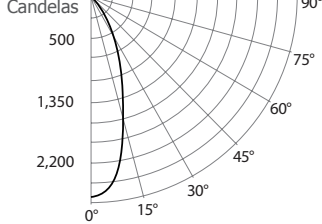
# Concerto LED - LD3D

3-1/2" Series

## PHOTOMETRIC DATA

### 3,000K, 80 + of CRI, Narrow Flood with performance 2 housing

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	72.4	3.8'
08'	40.7	5.1'
10'	26.1	6.4'
12'	18.1	7.7'
14'	13.3	9.0'
16'	10.2	10.2'

Beam: 35°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K	Narrow Flood
CBCP / Lumens	2,607	/ 1,278
Watts	120V	277V
	21.5W	22W
Operating AMPS	0.18A	0.079A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	59	
Spacing Criteria	0.6	
Certificate LM79-08	Based on test 475903	

#### COEFFICIENT OF UTILIZATION - %

Ceiling Reflect %	80			50			30		
Wall Reflect %	50	30	50	30	50	30	50	30	
RCR	0	119	119	111	111	106	106	106	
	2	104	101	99	97	96	94	94	
	4	93	88	89	85	88	84	84	
	6	83	78	81	77	80	76	76	
	8	75	70	74	69	73	69	69	
	10	69	64	68	63	67	63	63	

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,039	81.3%
0-40	1,232	96.4%
0-60	1,260	98.6%
60-90	18	1.4%
0-90	1,278	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	62	0.71
6'	35	0.4
7'	24	0.28
8'	24	0.28
9'	16	0.18

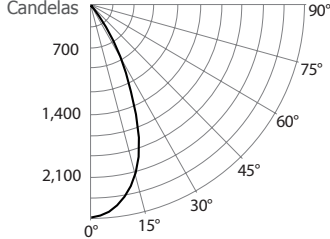
Local 38' x 38' x 10'. Workplan located 2 1/2' (30").  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	2,607	45	18
5	2,510	55	9
10	2,116	65	6
15	1,554	75	8
20	1,097	85	7
25	825	90	0
35	307		

### 3,000K, 80 + of CRI, Flood with performance 2 housing

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	60.8	5.3'
08'	34.2	7.1'
10'	21.9	8.8'
12'	15.2	10.6'
14'	11.2	12.4'
16'	8.5	14.1'

Beam: 48°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K	Flood
CBCP / Lumens	2,187	/ 1,370
Watts	120V	277V
	21.5W	22W
Operating AMPS	0.18A	0.079A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	63.4	
Spacing Criteria	0.7	
Certificate LM79-08	475915	

#### COEFFICIENT OF UTILIZATION - %

Ceiling Reflect %	80			50			30		
Wall Reflect %	50	30	50	30	50	30	50	30	
RCR	0	119	119	111	111	106	106	106	
	2	107	104	102	100	99	97	97	
	4	98	94	95	92	93	90	90	
	6	90	86	88	85	87	84	84	
	8	83	79	82	78	81	78	78	
	10	77	73	76	72	76	72	72	

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,144	83.52%
0-40	1,322	96.51%
0-60	1,348	98.40%
60-90	22	1.60%
0-90	1,370	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	67	0.96
6'	37	0.54
7'	26	0.37
8'	26	0.37
9'	17	0.24

Local 38' x 38' x 10'. Workplan located 2 1/2' (30").  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	2,187	45	17
5	2,138	55	10
10	2,006	65	6
15	1,790	75	9
20	1,453	85	7
25	982	90	0
35	274		

# CONTRASTE

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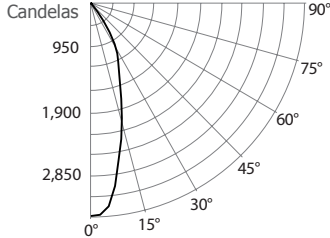
# Concerto LED - LD3D

3-1/2" Series

## PHOTOMETRIC DATA

### 3,000K, 80 + of CRI, Narrow Flood with performance 3 housing

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	94.7	3.6'
08'	53.3	4.8'
10'	34.1	6.0'
12'	23.7	7.2'
14'	17.4	8.4'
16'	13.3	9.6'

Beam: 33°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K	Narrow Flood
CBCP / Lumens	3,409	/ 1,566
Watts	120V	277V
	29.2W	29.7W
Operating AMPS	0.24A	0.107A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	53.6	
Spacing Criteria	0.5	
Certificate LM79-08	607002	

#### COEFFICIENT OF UTILIZATION - %

Ceiling Reflect %	80			50			30		
Wall Reflect %	50	30	50	30	50	30	50	30	50
RCR	0	119	119	111	111	106	106	106	106
	2	107	104	102	100	99	98	98	98
	4	98	94	95	92	93	90	90	90
	6	91	86	88	85	87	84	84	84
	8	84	79	82	78	81	78	78	78
	10	77	73	76	72	76	72	76	72

#### Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,287	82.22%
0-40	1,512	96.58%
0-60	1,544	98.62%
60-90	22	1.38%
0-90	1,566	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	76	1.29
6'	43	0.73
7'	30	0.51
8'	30	0.51
9'	19	0.32

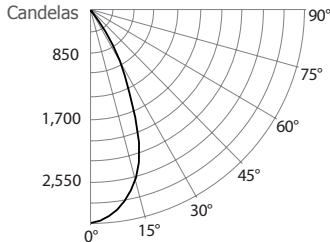
Local 38' x 38' x 10'. Workplan located 2 1/2' (30").  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	3,409	45	22
5	3,272	55	11
10	2,549	65	8
15	1,912	75	9
20	1,352	85	8
25	1,030	90	0
35	355		

### 3,000K, 80 + of CRI, Flood with performance 3 housing

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	83.8	5.2'
08'	47.1	7.0'
10'	30.2	8.7'
12'	20.9	10.4'
14'	15.4	12.2'
16'	11.8	13.9'

Beam: 47°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K	Flood
CBCP / Lumens	3,016	/ 1,842
Watts	120V	277V
	29.28W	29.78W
Operating AMPS	0.25A	0.107A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	62.9	
Spacing Criteria	0.7	
Certificate LM79-08	607004	

#### COEFFICIENT OF UTILIZATION - %

Ceiling Reflect %	80			50			30		
Wall Reflect %	50	30	50	30	50	30	50	30	50
RCR	0	119	119	111	111	106	106	106	106
	2	107	104	102	100	99	98	98	98
	4	98	94	95	92	94	91	91	91
	6	91	87	89	86	88	85	85	85
	8	84	80	83	79	82	78	78	78
	10	78	74	77	73	76	73	73	73

#### Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,558	84.61%
0-40	1,792	97.31%
0-60	1,821	98.88%
60-90	21	1.12%
0-90	1,842	100%

#### MULTIPLE UNIT DATA - (RCR 2)

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	90	1.3
6'	50	0.73
7'	35	0.51
8'	35	0.51
9'	22	0.32

Local 38' x 38' x 10'. Workplan located 2 1/2' (30").  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	3,016	45	20
5	2,933	55	11
10	2,749	65	7
15	2,464	75	8
20	1,996	85	8
25	1,300	90	0
35	361		

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## 3-1/2" Series

### LD3D MODEL PHOTOMETRIC DATA

#### With performance 1 housing

	Narrow Flood		Flood	
	Lms	lm/W	Lms	lm/W
<b>2,700K with 80 CRI</b>	985.9	61.4	966	61.5
<b>3,000K with 90 CRI</b>	832	53	745	46.3
<b>3,500K with 80 CRI</b>	1,102	70.2	1,141	72.6
<b>4,000K with 80 CRI</b>	1,123	71.5	1,139	70.3

#### With performance 2 housing

	Narrow Flood		Flood	
	Lms	lm/W	Lms	lm/W
<b>2,700K with 80 CRI</b>	1,284	59.7	1,260	58.6
<b>3,000K with 90 CRI</b>	947	41.2	1,097	49.6
<b>3,500K with 80 CRI</b>	1,359	62.9	1,452	67.5
<b>4,000K with 80 CRI</b>	1,516	66.2	1,480	68.8

#### With performance 3 housing

	Narrow Flood		Flood	
	Lms	lm/W	Lms	lm/W
<b>2,700K with 80 CRI</b>	1,760	60.7	1,728	58.8
<b>3,000K with 90 CRI</b>	1,183	40.5	1,465	50
<b>3,500K with 80 CRI</b>	1,359	46.9	1,763	60.8
<b>4,000K with 80 CRI</b>	1,517	51.6	1,797	61.1

\* All .ies and Lighting facts files are available on our Website.



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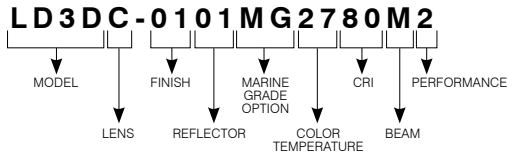
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## 3-1/2" Series

### CODIFICATION EXAMPLE



### ORDERING CODES

MODEL	LENSES	TRIM FINISHES	REFLECTORS	MARINE GRADE	COLOR TEMPERATURES	CRI	BEAM	PERFORMANCE
<b>LD3D</b>								
<b>LD3D</b>	<b>C</b> Clear <b>F</b> Frosted <b>H</b> Honeycomb <b>L</b> Linear <b>P</b> Prismatic <b>S</b> Solite	<b>-01</b> White <b>-02</b> Black <b>-03</b> 24K Gold Plated <b>-04</b> Chrome <b>-04BR</b> Brushed Chrome <b>-05</b> Architectural Bronze <b>-06</b> Antique Copper <b>-11</b> Matte White <b>-12BR</b> Brushed Nickel <b>-13</b> Satin Nickel <b>-15</b> Metallic Grey	<b>ANODIZED</b> <b>AN</b> Anodized Aluminum  <b>SPECULAR</b> <b>CL</b> Clear <b>BK</b> Black  <b>PAINTED</b> <b>01</b> White* <b>02</b> Black <b>05</b> Architectural Bronze* <b>06</b> Antique Copper* <b>11</b> Matte White* <b>15</b> Metallic Grey*	<b>MG (optional)</b> May be applied on finishes: -01, -02, -05, -06, -11 and -15	<b>27</b> 2,700K <b>30</b> 3,000K <b>35</b> 3,500K <b>40</b> 4,000K	<b>80</b> 80+ CRI <b>90</b> 90+ CRI  (only with 3,000K)	<b>M</b> Narrow Flood (33°) <b>W</b> Flood (48°)	<b>2</b>          <b>3</b>          Use with Performance 1 or Performance 2 Housings

\*These reflector colors are available only with the same trim color.

For future on site modification of the light distribution.

#### Ordering codes: replacement lenses and reflectors.

##### Lenses (to modify the light diffusion)

Linear: **103091**      Honeycomb: **103089**  
 Solite: **103097**      Frosted: **313206**  
 Prismatic: **103094**      Clear: **102958**

##### Reflectors (to modify the beam angle)

For a Narrow Flood: **316082**  
 For a Flood: **316083**

**MARINE GRADE** - Unless otherwise indicated, trims are for interior, cold and exterior locations where fixtures are not subject to direct rain or snow exposure as in soffits. **MARINE GRADE** treatment is recommended for exterior, shower and high salinity environment.

