

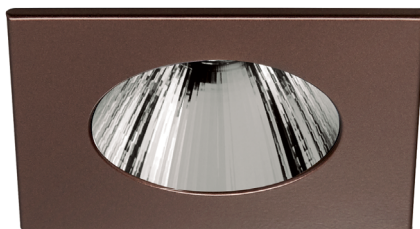
# Concerto LED - LD3F

3-1/2" Series

## Low Profile Square Regressed Trim with Lipped Reflector



LD3FC-02AN (illustrated)



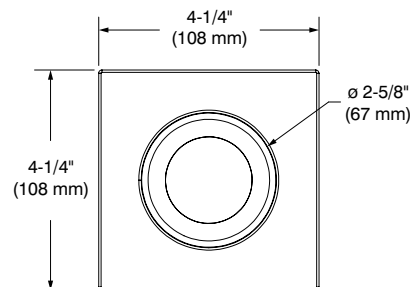
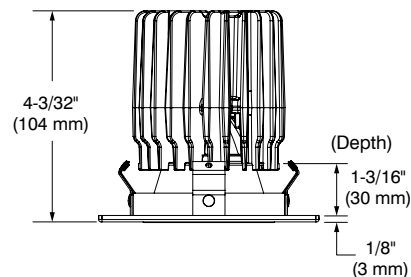
LD3FC-06CL — Spot (illustrated)

Project \_\_\_\_\_

Notes \_\_\_\_\_

Fixture Type \_\_\_\_\_

Date \_\_\_\_\_



### DESCRIPTION

This series of fixed round or square trims offered with narrow flood or flood 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 TEMPERATURE** 2,700K, 3,000K, 3,500K and 4,000K

**CRI** 80 +  
90 + (only at 3,000K)

**POWER SUPPLY** Several driver models available giving you 2 dimming options: ELV and 0-10V. Refer to the housing specifications sheet for more details.

**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)  
**Performance 1:** 1,640 lumens, 97 lm/W  
**Performance 2:** 2,030 lumens, 86 lm/W  
**Performance 3:** 2,285 lumens, 75 lm/W

**TRIM** Powder coated paint or plated die-formed steel. Different finishes available.

**HEAT SINK** High quality injected aluminum heat sink ensuring maximum heat dissipation.



# CONTRASTE

2019-10  
Revision 3

PRINTED IN CANADA

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# Concerto LED - LD3F

**3-1/2" Series****SPECIFICATIONS (CONT'D)****OPTIC SYSTEM**

Optional 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.

**Choice of available lenses (Spot is only available with clear lens):**

Clear (**C**), Frosted (**F**), Honeycomb (**H**), Linear (**L**), Prismatic (**P**) and Solite (**S**)

**Optical reflectors available:**

**S:** Spot → 21°

**M:** Narrow Flood → 26°

**REFLECTORS****Anodized**

Anodized Aluminum (**AN**)

**Specular**

Clear (**CL**)\*\*

Black (**BK**)

**Paint**

White (**01**)\*

Black (**02**)

Architectural Bronze (**05**)\*

Antique Copper (**06**)\*

Matte White (**11**)\*

Metallic Grey (**15**)\*

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

\*\*Spot is only available with specular clear reflector.

**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.)

	Remodel Housing	New Construction Housing	Insulated Housing
<b>Performance 1</b> (1,500 lumens)	RELD300LD1 RELD300LV1	NWLD300LD1 NWLD300LV1	ISLD300LD1 ISLD300LV1
<b>Performance 2</b> (2,000 lumens)	RELD300LD2 RELD300LV2	NWLD300LD2 NWLD300LV2	ISLD300LD2 ISLD300LV2
<b>Performance 3</b> (2,500 lumens)	Not available	NWLD300LD3	Not available

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

**CERTIFICATION**

cULus **E343977** for **damp locations**

**WARRANTY**

1 year for standard finishes and 5 years on LED module.



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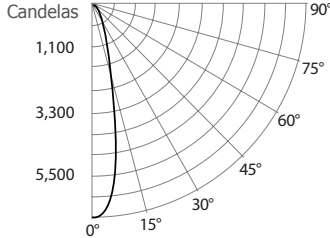
# Concerto LED - LD3F

## 3-1/2" Series

### PHOTOMETRIC DATA

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

##### CANDLEPOWER DISTRIBUTION



##### LIGHT CONE

Distance	FC	DIA
06'	182.1	2.5'
08'	102.4	3.3'
10'	65.6	4.1'
12'	45.5	4.9'
14'	33.4	5.8'
16'	25.6	6.6'

Beam: 23°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

##### LUMINAIRE

Performance 1 LED	3,000K Spot	
CBCP / Lumens	6,555 / 1,639	
Watts	120V	277V
	16.89W	17.39W
Operating AMPS	0.14A	0.062A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	96.6	
Spacing Criteria	0.4	
Certificate LM79-08	Based on test S1405261-R1	

##### 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	105	102	101	98	98	98	96	96
	4	95	90	92	88	90	87	87	87
	6	87	82	85	81	84	80	80	80
	8	80	76	79	75	78	74	74	74
	10	75	70	74	70	73	69	69	69

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

##### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,382	84.3%
0-40	1,556	94.9%
0-60	1,605	97.9%
60-90	34	2.1%
0-90	1,639	100%

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

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	81	0.75
6'	45	0.42
7'	32	0.29
8'	32	0.29
9'	20	0.19

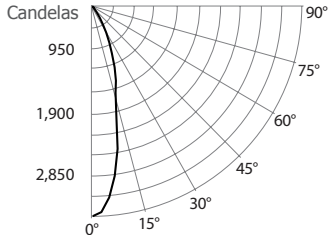
Local 38' x 38' x 10'. Workplan located 2 1/2' (30°).  
Reflection factor of 80%/50%/30%.

##### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	6,555	45	28
5	6,030	55	24
10	3,974	65	16
15	1,830	75	10
20	1,001	85	6
25	721	90	0
35	275		

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

##### CANDLEPOWER DISTRIBUTION



##### LIGHT CONE

Distance	FC	DIA
06'	95.1	2.8'
08'	53.5	3.7'
10'	34.2	4.7'
12'	23.8	5.6'
14'	17.5	6.5'
16'	13.4	7.5'

Beam: 26°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

##### LUMINAIRE

Performance 1 LED	3,000K Narrow Flood	
CBCP / Lumens	3,424 / 1,095	
Watts	120V	277V
	15.75W	16.25W
Operating AMPS	0.13A	0.058A
Lumen Maintenance	L70 @ 50,000 Hrs	
CRI	80 +	
Lumens/Watt	69	
Spacing Criteria	0.4	
Certificate LM79-08	475847	

##### 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	109	106	104	102	101	100	100	100
	4	101	98	98	95	96	94	94	94
	6	95	91	93	90	92	89	89	89
	8	89	85	88	84	87	84	84	84
	10	84	80	83	80	82	79	79	79

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

##### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	995	90.85%
0-40	1,078	98.45%
0-60	1,095	99.93%
60-90	1	0.07%
0-90	1,095	100%

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

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	54	0.7
6'	31	0.39
7'	21	0.27
8'	21	0.27
9'	14	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	3,424	45	16
5	3,136	55	5
10	2,365	65	0
15	1,461	75	0
20	1,059	85	0
25	655	90	0
35	118		



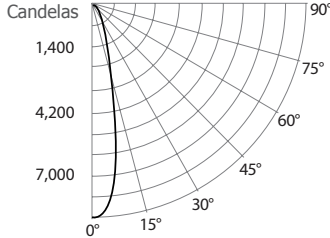
# Concerto LED - LD3F

3-1/2" Series

## PHOTOMETRIC DATA

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	232.1	2.4'
08'	130.6	3.2'
10'	83.6	4.0'
12'	58.0	4.8'
14'	42.6	5.6'
16'	32.6	6.4'

Beam: 23°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K Spot
CBCP / Lumens	8,357 / 2,029
Watts	120V 277V 23.59W 24.09W
Operating AMPS	0.19A 0.086A
Lumen Maintenance	L70 @ 50,000 Hrs
CRI	80 +
Lumens/Watt	85.6
Spacing Criteria	0.4
Certificate LM79-08	Based on test S1405262-R1

#### 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	105	102	101	98	98	96	96	
	4	95	91	92	89	90	87	87	
	6	87	82	85	81	84	80	80	
	8	81	76	79	75	78	75	75	
	10	75	71	74	70	73	70	70	

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,714	84.5%
0-40	1,928	95.1%
0-60	1,986	97.9%
60-90	42	2.1%
0-90	2,029	100%

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

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	100	1.05
6'	56	0.59
7'	39	0.41
8'	39	0.41
9'	25	0.26

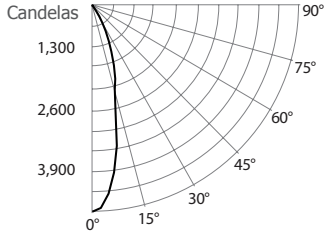
Local 38' x 38' x 10'. Workplan located 2 1/2' (30°).  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	8,357	45	33
5	7,757	55	30
10	4,923	65	18
15	2,153	75	13
20	1,224	85	10
25	896	90	0
35	343		

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	126.4	2.8'
08'	71.1	3.7'
10'	45.5	4.7'
12'	31.6	5.6'
14'	23.2	6.5'
16'	17.8	7.5'

Beam: 26°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 2 LED	3,000K Narrow Flood
CBCP / Lumens	4,549 / 1,460
Watts	120V 277V 22.52W 23.02W
Operating AMPS	0.18A 0.083A
Lumen Maintenance	L70 @ 50,000 Hrs
CRI	80 +
Lumens/Watt	65
Spacing Criteria	0.4
Certificate LM79-08	475857

#### 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	109	106	104	102	101	100	100	
	4	101	98	98	95	96	94	94	
	6	95	91	93	90	92	89	89	
	8	89	85	88	84	87	84	84	
	10	84	80	83	80	82	79	79	

Zonal Cavity Method  
Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,326	90.86%
0-40	1,437	98.50%
0-60	1,458	99.95%
60-90	1	0.05%
0-90	1,460	100%

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

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	72	1
6'	41	0.56
7'	28	0.39
8'	28	0.39
9'	18	0.25

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	4,549	45	21
5	4,172	55	6
10	3,152	65	0
15	1,933	75	0
20	1,414	85	0
25	877	90	0
35	159		



# CONTRASTE

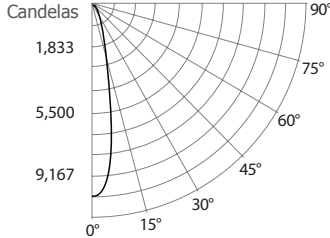
# Concerto LED - LD3F

3-1/2" Series

## PHOTOMETRIC DATA

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	278.7	2.2'
08'	156.8	2.9'
10'	100.3	3.7'
12'	69.7	4.4'
14'	51.2	5.2'
16'	39.2	5.9'

Beam: 21°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K Spot
CBCP / Lumens	10,034 / 2,282
Watts	120V 277V 30.58W 31.08W
Operating AMPS	0.25A 0.112A
Lumen Maintenance	L70 @ 50,000 Hrs
CRI	80 +
Lumens/Watt	74.3
Spacing Criteria	0.4
Certificate LM79-08	Based on test S1405264-R1

#### 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	106	102	101	98	98	98	96	
	4	95	91	92	89	90	87		
	6	87	83	85	81	84	80		
	8	81	76	79	75	78	75		
	10	75	71	74	70	74	70		

#### Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,919	84.1%
0-40	2,168	95%
0-60	2,237	98.1%
60-90	44.5	1.9%
0-90	2,282	100%

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

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	112	1.36
6'	63	0.76
7'	44	0.53
8'	44	0.53
9'	28	0.34

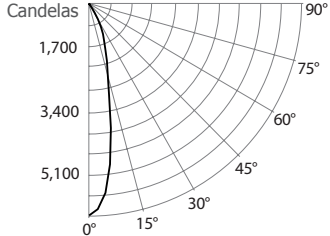
Local 38' x 38' x 10'. Workplan located 2 1/2' (30°).  
Reflection factor of 80%/50%/30%.

#### CANDELAS DISTRIBUTION

DEGREES/VERTICAL	CANDELAS	DEGREES/VERTICAL	CANDELAS
0	10,034	45	37
5	9,329	55	33
10	5,278	65	19
15	2,317	75	14
20	1,363	85	10
25	1,007	90	0
35	397		

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

#### CANDLEPOWER DISTRIBUTION



#### LIGHT CONE

Distance	FC	DIA
06'	167.5	2.5'
08'	94.2	3.3'
10'	60.3	4.1'
12'	41.9	4.9'
14'	30.8	5.7'
16'	23.6	6.5'

Beam: 23°  
Beam Edge defined as 50% of Maximum Nadir Candle-power.

#### LUMINAIRE

Performance 3 LED	3,000K Narrow Flood
CBCP / Lumens	6,029 / 1,620
Watts	120V 277V 29.24W 29.74W
Operating AMPS	0.24A 0.107A
Lumen Maintenance	L70 @ 50,000 Hrs
CRI	80 +
Lumens/Watt	55.5
Spacing Criteria	0.4
Certificate LM79-08	607000

#### 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	109	106	104	102	101	100		
	4	101	98	98	96	97	94		
	6	95	92	93	90	92	90		
	8	90	86	88	85	87	85		
	10	85	81	84	81	83	80		

#### Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1,476	91.13%
0-40	1,591	98.23%
0-60	1,618	99.88%
60-90	2	0.12%
0-90	1,620	100%

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

SPACING ON CENTER	INITIAL FOOTCANDLES	WATTS/SQ. FT.
5'	80	1.29
6'	45	0.73
7'	31	0.51
8'	31	0.51
9'	20	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	6,029	45	25
5	5,419	55	9
10	3,605	65	0
15	2,067	75	1
20	1,358	85	0
25	957	90	0
35	145		



# Concerto LED - LD3F

**3-1/2" Series****LD3F MODEL PHOTOMETRIC DATA****With performance 1 housing**

	Spot		Narrow Flood	
	Lms	lm/W	Lms	lm/W
<b>2,700K with 80 CRI</b>	1,470	87.6	1,003	62.5
<b>3,000K with 90 CRI</b>	1,207.7	71.9	837	51.6
<b>3,500K with 80 CRI</b>	1,647.8	98	1,142	71.2
<b>4,000K with 80 CRI</b>	1,686.8	100.4	1,169	72.1

**With performance 2 housing**

	Spot		Narrow Flood	
	Lms	lm/W	Lms	lm/W
<b>2,700K with 80 CRI</b>	1,847.7	78.2	1,409	62.3
<b>3,000K with 90 CRI</b>	1,580	67	1,180	51.2
<b>3,500K with 80 CRI</b>	2,139.6	90.5	1,588	70.2
<b>4,000K with 80 CRI</b>	2,157.1	91.2	1,601	70

**With performance 3 housing**

	Spot		Narrow Flood	
	Lms	lm/W	Lms	lm/W
<b>2,700K with 80 CRI</b>	2,006.8	66.1	1,412	48.4
<b>3,000K with 90 CRI</b>	1,703.4	56.1	1,296	44.7
<b>3,500K with 80 CRI</b>	2,249.6	74	1,745	60.2
<b>4,000K with 80 CRI</b>	2,313.0	76.6	1,759	60.7

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



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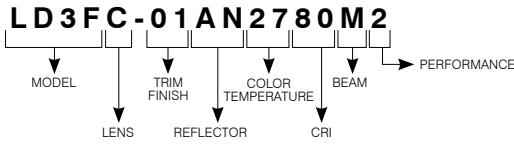
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# Concerto LED - LD3F

3-1/2" Series

## CODIFICATION EXAMPLE



## ORDERING CODES

MODEL	LENSES	TRIM FINISHES	REFLECTORS	COLOR TEMPERATURES	CRI	BEAMS	PERFORMANCE
<b>LD3F</b>							
<b>LD3F</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>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>S</b> Spot (21°) <b>M</b> Narrow Flood (26°)	<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.

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

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

