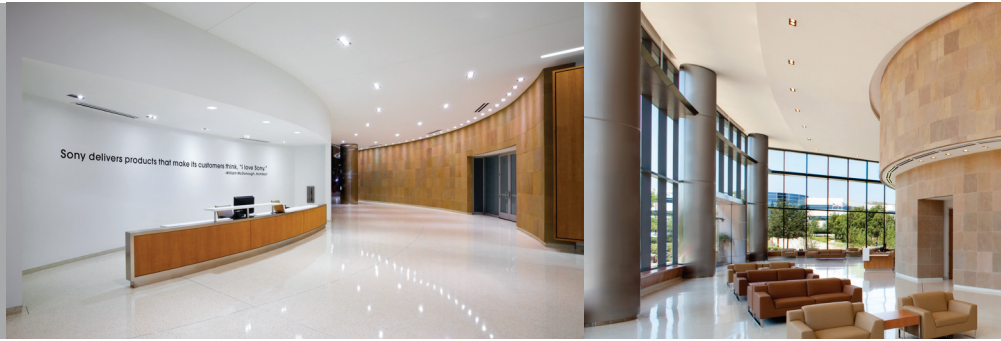
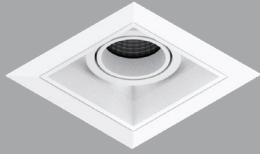




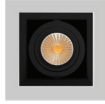
MODULE/FLANGE COLORS



WH-WH-White



BK-BK-Black



WH-BK-White/Black



BK-WH-Black/White

**FEATURES**

A recessed multiple mini combo downlight, available in 1, 2, 3 or 4 heads, with fully interchangeable, field-adjustable modules. Each individual head has full aiming adjustability, rotating 360°, pivoting 35° vertically, with a secure locking mechanism. Each head can be individually specified, allowing for mix-and-matching of different color temperatures, finishes, flange colors, and field-changeable optics in a single housing. Delivering the full spectrum of cool to warm tones, the FCM is ideal for retail, hospitality, commercial, and high-end residential applications.

|                       |                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------|
| LUMENS                | 1000 per head                                                                                    |
| CCT                   | 27K, 30K, 35K, 40K, 50K (only 85 CRI)                                                            |
| CRI                   | 90+ Standard                                                                                     |
| COLOR QUALITY         | 2-Step MacAdam Ellipse                                                                           |
| DISTRIBUTION PATTERNS | SP 23° (Spot), NFL 30° (Narrow Flood), FL 40° (Flood)                                            |
| TRIM OPTIONS          | 1, 2, 3, 4 Trim, Trimless                                                                        |
| MODULE FINISH         | BK (Black), WH (White)                                                                           |
| FLANGE COLORS         | BK (Black), WH (White), Trimless<br>Custom RAL Colors.                                           |
| DIMMING               | 0-10V Flicker Free 1% Dimming Standard (DIM10) 120-277V<br>Triac dimming 5% Dimming (DIMTR) 120V |
| RATING                | cULus, IC Rated                                                                                  |
| EMERGENCY             | 10W - Up to 1000L Output (Bodine BSL310)                                                         |
| LIFETIME              | L70 at 102,000 Hours                                                                             |
| PHOTOMETRIC TESTS     | In Accordance with IES LM79-08, LM80 and TM-30, TM-21                                            |

FCM1-LED



FCM2-LED



FCM3-LED



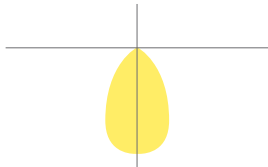
FCM4-LED



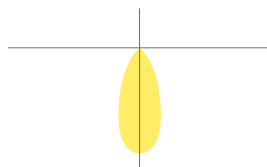
| NOMINAL LUMENS | DELIVERED LUMENS | WATTAGE |
|----------------|------------------|---------|
| 1000           | 1042             | 15.7W   |

Based on 4000K, 90+ CRI. Actual wattage may vary +/- 5%

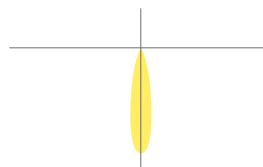
FL: FLOOD  
Candlepower Distribution Curve



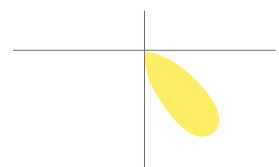
NFL: NARROW FLOOD  
Candlepower Distribution Curve



SP: SPOT  
Candlepower Distribution Curve



WALL WASH  
Candlepower Distribution Curve



#### OPTICS AND REFLECTOR

A multi-segmented reflector provides precise beam control and field-changeable optics in Spot, Narrow Flood, Flood, and Wall Wash. Each luminaire head can provide task, accent, or general illumination. Available in trim or trimless, black or white finish. The FCM is the perfect solution for using a single housing to highlight up to 4 different displays in a retail setting.

#### REMOVABLE LED MODULE

Field-changeable modular components allow you to remove and upgrade your light without replacing the junction box. Completely interchangeable, module is easy to service and swap out.

#### AIMING

The proprietary hot aiming system allows each individual head to be rotated 360° horizontally and 35° vertically, and to be aimed precisely at the desired position, which can be locked into position without the use of tools.

#### HOUSING

Thermally protected for new construction, non-IC, and IC applications. Housing vertically adjusts to accommodate various ceiling heights. Fabricated from 18-gauge steel and post-painted. Interior painted matte black for maximum heat dissipation, zero internal reflection, and glare-free illumination. Each luminaire head made of die-cast aluminum to dissipate heat.

#### TRIM OPTION

Post-painted powder coated die-cast trim ring available in white, black, and custom RAL colors. (Please consult factory for custom finish options). Trim attaches to housing with secure clips for snug fit and zero light leakage.

#### TRIMLESS OPTION

Mudding may be applied right up to the edge of the luminaire opening for a seamless appearance. Trimless accessory is secured to the housing with safety cable to prevent fractures in the ceiling and/or drywall during and after installation.

#### MOUNTING FRAME & BRACKET

Pre-installed bar hangers can be shortened to position and lock housing at any point within the joist span. Bar hangers can fit onto T-Bar spline with additional slots and holes for special mounting methods, if necessary.

#### THERMAL MANAGEMENT SYSTEM

Passive cooling die-cast aluminum heatsink. LED light engine and driver are replaceable, upgradeable, and can be accessed from above and below the ceiling. A unique locking mechanism aligns the reflector with the light engine for precise optical performance.

#### DRIVER ELECTRICAL INFORMATION

The LED driver is rated for 50 to 60Hz at 120V/277V input, produces less than 20% THD, has a power factor between 90% and 100%, and is thermally protected for additional safety. Junction box and driver can be accessed from below and above the ceiling. Junction box is listed for through branch circuit wiring.

#### DIMMING & DRIVER INFORMATION

**DIM10** - 0-10V dimming on either MVOLT 120 or 277. Dimmable down to 1% of initial lumens, standard.

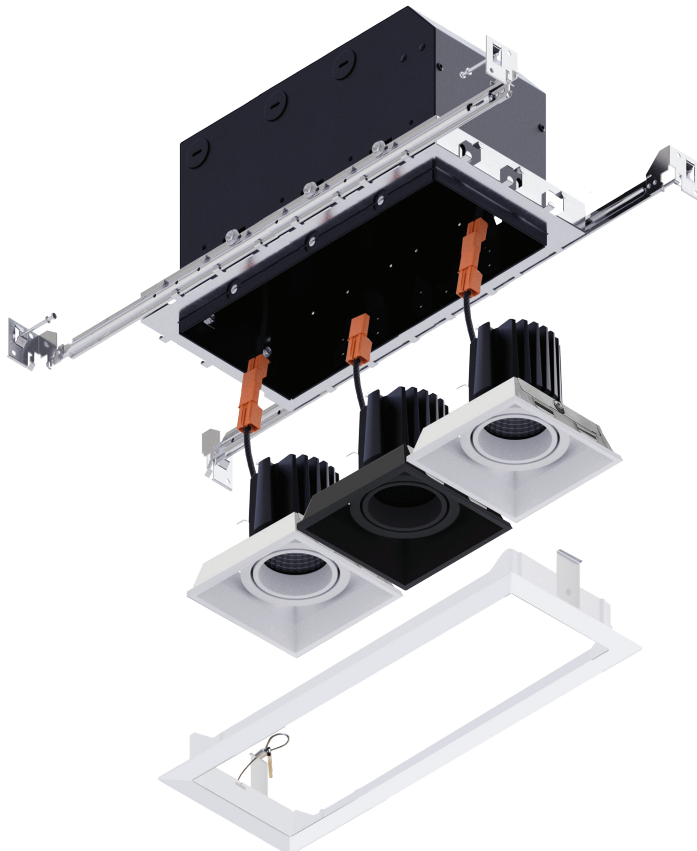
**DIMTR** - Triac & electronic low voltage dimming. Available in 120V.

#### WARRANTY

Five-year carefree warranty for parts and components. (Labor not included.)

#### LISTINGS

c-UL-us - Listed for Feed Through Wiring.



## MULTIPLE COMBINATIONS

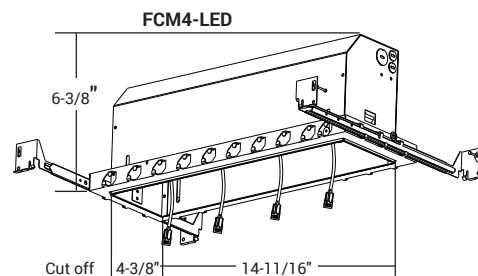
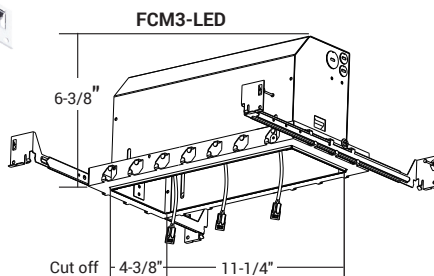
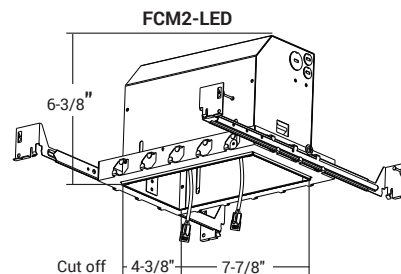
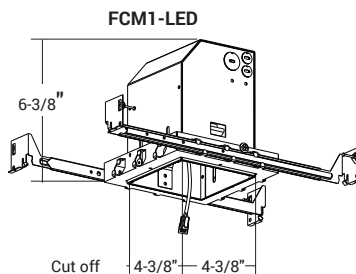
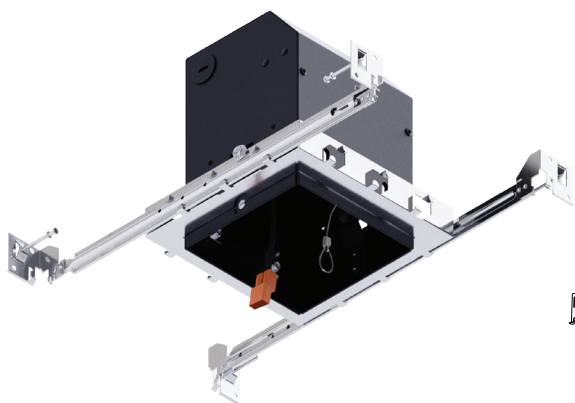
Mix and match to create multiple combinations.

Step 1: Choose your housing. Either 1, 2, 3, or 4.

Step 2: Choose your modules.

Step 3: Choose trim or trimless. For trim, choose finish.

## HOUSING DIMENSIONS



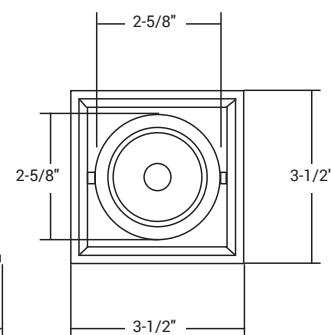
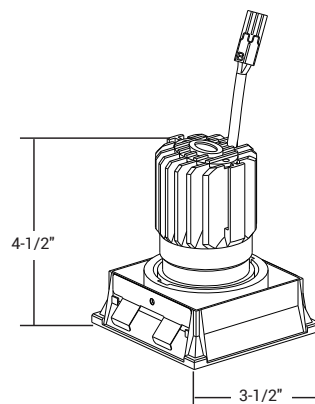
## LED MODULE DIMENSIONS



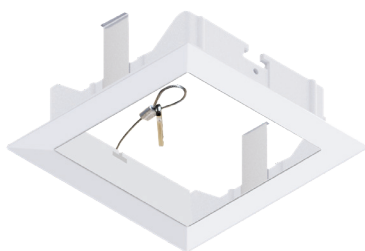
WH-White



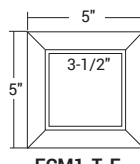
BK-Black



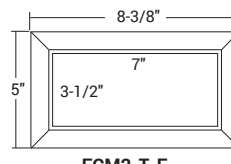
## TRIM OPTION DIMENSIONS



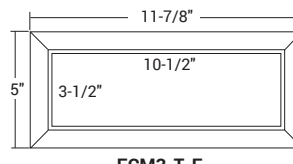
FLANGE-WH-White



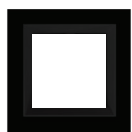
FCM1-T-F



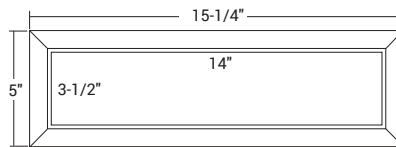
FCM2-T-F



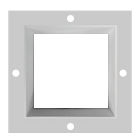
FCM3-T-F



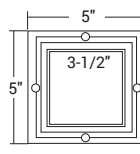
FLANGE-BK-Black



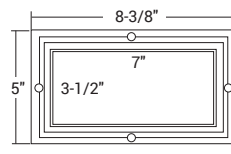
FCM4-T-F



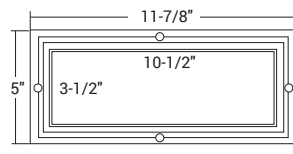
TRIM-LESS  
FCM1-T-TL



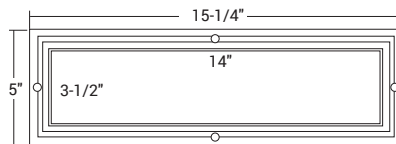
FCM1-T-TL



FCM2-T-TL



FCM3-T-TL



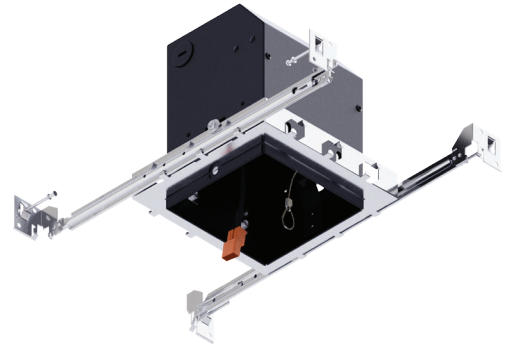
FCM4-T-TL

## ORDERING GUIDE

### HOUSING

Example: **FCM1-LED-DIMTR-120/DIM10-MVOLT**

| SERIES                                                                                                                                           | DIMMING                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> FCM1-LED<br><input type="checkbox"/> FCM2-LED<br><input type="checkbox"/> FCM3-LED<br><input type="checkbox"/> FCM4-LED | <input type="checkbox"/> DIMTR-120/ DIM10-MVOLT<br><br><i>0-10V dimming on either MVOLT 120 or 277</i> |



### LED MODULE

Example: **FCM-LED-1000L-FL-30K-90-WH**

| SERIES                           | LUMEN                          | OPTICS                                                                                                                            | CCT - CRI                                                                                                                                                                                                   | INTERIOR COLOR                                                             |
|----------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> FCM-LED | <input type="checkbox"/> 1000L | <input type="checkbox"/> SP- Spot-23°<br><input type="checkbox"/> NFL- Narrow Flood-30°<br><input type="checkbox"/> FL- Flood-40° | <input type="checkbox"/> 27K - 90<br><input type="checkbox"/> 30K - 90<br><input type="checkbox"/> 35K - 90<br><input type="checkbox"/> 40K - 90<br><input type="checkbox"/> 50K - 85<br>50K is 85 CRI only | <input type="checkbox"/> WH (White)<br><input type="checkbox"/> BK (Black) |

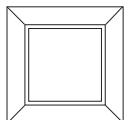
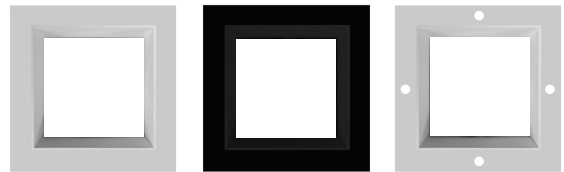


**MUST ORDER LED MODULES BASED ON HOUSING SIZE.**  
**FCM3-LED (3 HEADS) = 3 X FCM-LED (3 LED MODULES)**

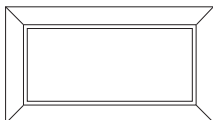
### TRIM OPTIONS

Example: **FCM1-T-F-BK**

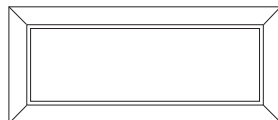
| SERIES                                                                                                                                   | TRIM OPTION                                                                    | TRIM COLOR                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> FCM1-T<br><input type="checkbox"/> FCM2-T<br><input type="checkbox"/> FCM3-T<br><input type="checkbox"/> FCM4-T | <input type="checkbox"/> F (Flanged)<br><input type="checkbox"/> TL (Trimless) | <input type="checkbox"/> WH (White)<br><input type="checkbox"/> BK (Black)<br><br><i>Note: Trimless has no finish color.</i> |



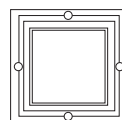
FCM1-T-F



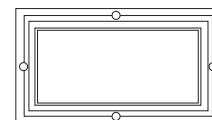
FCM2-T-F



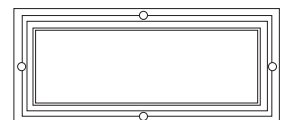
FCM3-T-F



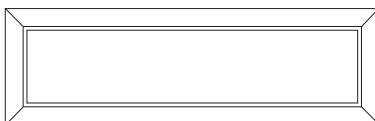
FCM1-T-TL



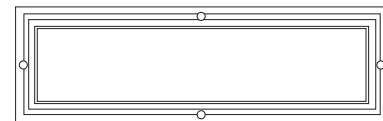
FCM2-T-TL



FCM3-T-TL



FCM4-T-F



FCM4-T-TL

**FCM1-LED-1000L-DIM10-120-FL-30K-90-F-WH-BK( PER HEAD)**

INPUT WATTS: **14.4**

LUMENS: **1057**

CRI: **90**

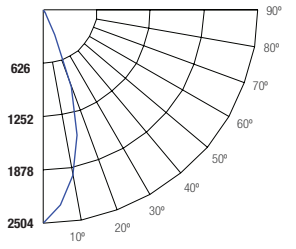
EFFICACY: **73**

CCT: **3000K**

TEST NO.: **EL08252055**

SPACING CRITERIA: **0.62**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 683.53  | 65.8  | 64.7  |
| 0-30 | 961.02  | 92.5  | 90.9  |
| 0-40 | 999.43  | 96.2  | 94.6  |
| 0-60 | 1029.41 | 99.1  | 97.4  |
| 0-80 | 1042.79 | 100.4 | 98.7  |
| 0-90 | 1043.35 | 100.4 | 98.7  |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 13093      | 12768       | 12856       |
| 55               | 12399      | 12374       | 11949       |
| 65               | 10834      | 11807       | 9805        |
| 75               | 3306       | 4580        | 2271        |
| 85               | 3235       | 2742        | 2468        |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 217.41 |
| 10-20 | 466.12 |
| 20-30 | 277.5  |
| 30-40 | 38.41  |
| 40-50 | 16.12  |
| 50-60 | 13.86  |
| 60-70 | 10.01  |
| 70-80 | 3.37   |
| 80-90 | 0.56   |

**Candela Tabulation**

| 0  | 0        |
|----|----------|
| 0  | 2455.019 |
| 5  | 2311.23  |
| 15 | 1542.33  |
| 25 | 343.94   |
| 35 | 30.4     |
| 45 | 19.37    |
| 55 | 14.88    |
| 65 | 9.58     |
| 75 | 1.79     |
| 85 | 0.59     |
| 90 | 0.12     |

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20

| Cone of Light           |                                   |                         |                          |
|-------------------------|-----------------------------------|-------------------------|--------------------------|
| 2                       | 855                               | 1.2                     | 1.2                      |
| 3                       | 227                               | 2.3                     | 2.3                      |
| 5                       | 98.8                              | 3.5                     | 3.5                      |
| 7                       | 55.0                              | 4.7                     | 4.8                      |
| 8                       | 35.9                              | 5.8                     | 5.9                      |
| 10                      | 24.7                              | 7.0                     | 7.1                      |
| (FT.) Distance to Plane | (FC.) Initial Footcandle at Nadir | (FT.) Beam Vert. Spread | (FT.) Beam Horiz. Spread |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |
| ROOM CAVITY RATIO | 0  | 121 | 121 | 121 | 121 | 118 | 118 | 118 | 118 | 112 | 112 | 112 | 107 | 107 | 107 | 103 | 103 | 103 | 103 | 103 | 103 | 100 |
|                   | 1  | 116 | 113 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 99  | 98  | 97  | 96  | 94  | 93  | 96  |
|                   | 2  | 111 | 107 | 103 | 100 | 109 | 105 | 102 | 99  | 102 | 99  | 97  | 99  | 96  | 95  | 96  | 95  | 96  | 94  | 93  | 91  | 96  |
|                   | 3  | 107 | 101 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 94  | 91  | 95  | 92  | 90  | 92  | 90  | 88  | 87  | 85  | 87  | 87  |
|                   | 4  | 103 | 96  | 92  | 88  | 101 | 95  | 91  | 87  | 93  | 89  | 86  | 91  | 88  | 85  | 89  | 86  | 84  | 83  | 81  | 84  | 83  |
|                   | 5  | 99  | 92  | 87  | 83  | 97  | 91  | 86  | 83  | 89  | 85  | 82  | 87  | 84  | 81  | 86  | 83  | 80  | 79  | 77  | 76  | 79  |
|                   | 6  | 95  | 88  | 83  | 79  | 94  | 87  | 82  | 79  | 85  | 81  | 78  | 84  | 80  | 78  | 83  | 79  | 77  | 76  | 74  | 73  | 76  |
|                   | 7  | 92  | 84  | 79  | 75  | 90  | 83  | 79  | 75  | 82  | 78  | 75  | 81  | 77  | 74  | 80  | 76  | 74  | 73  | 71  | 70  | 73  |
|                   | 8  | 89  | 81  | 76  | 72  | 87  | 80  | 75  | 72  | 79  | 75  | 72  | 78  | 74  | 71  | 77  | 73  | 71  | 70  | 68  | 67  | 74  |
|                   | 9  | 85  | 77  | 73  | 69  | 84  | 77  | 72  | 69  | 76  | 72  | 69  | 75  | 71  | 69  | 74  | 71  | 69  | 68  | 67  | 65  | 77  |
| 10                | 83 | 75  | 70  | 67  | 82  | 74  | 70  | 66  | 73  | 69  | 66  | 73  | 69  | 66  | 72  | 68  | 66  | 65  | 63  | 61  | 65  |     |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCM1-LED-1000L-DIM10-120-FL-40K-90-F-WH-BK(PER HEAD)**

INPUT WATTS: **14.5**

LUMENS: **1100**

CRI: **90**

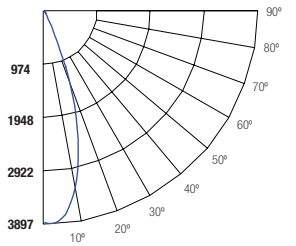
EFFICACY: **76**

CCT: **4000K**

TEST NO.: **EL01162047**

SPACING CRITERIA: **0.52**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 915.63  | 83.2  | 83.2  |
| 0-30 | 1048.73 | 95.3  | 95.3  |
| 0-40 | 1068.87 | 97.1  | 97.1  |
| 0-60 | 1095.92 | 99.6  | 99.6  |
| 0-80 | 1099.35 | 99.9  | 99.9  |
| 0-90 | 1099.36 | 99.9  | 99.9  |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 9938       | 10340       | 10166       |
| 55               | 6696       | 7555        | 7233        |
| 65               | 1126       | 2171        | 1903        |
| 75               | 251        | 397         | 622         |
| 85               | 39         | 39          | 39          |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 334.22 |
| 10-20 | 581.41 |
| 20-30 | 133.1  |
| 30-40 | 20.15  |
| 40-50 | 16.02  |
| 50-60 | 11.02  |
| 60-70 | 3      |
| 70-80 | 0.42   |
| 80-90 | 0.01   |

**Candela Tabulation**

| 0  | 0       |
|----|---------|
| 0  | 3875.08 |
| 5  | 3748.67 |
| 15 | 2288.64 |
| 25 | 188.22  |
| 35 | 31.97   |
| 45 | 20.53   |
| 55 | 11.22   |
| 65 | 1.39    |
| 75 | 0.19    |
| 85 | 0.01    |
| 90 | 0.01    |

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20

| Cone of Light           |                                   |                         |                          |
|-------------------------|-----------------------------------|-------------------------|--------------------------|
| 2                       | 1,341                             | 1.0                     | 1.0                      |
| 3                       | 356                               | 1.9                     | 1.9                      |
| 5                       | 155                               | 2.9                     | 2.9                      |
| 7                       | 86.3                              | 3.9                     | 3.9                      |
| 8                       | 56.3                              | 4.8                     | 4.8                      |
| 10                      | 38.8                              | 5.8                     | 5.8                      |
| (FT.) Distance to Plane | (FC.) Initial Footcandle at Nadir | (FT.) Beam Vert. Spread | (FT.) Beam Horiz. Spread |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

|                   | RC | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |  |  | 0% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|----|
|                   | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0%  |  |  |    |
| ROOM CAVITY RATIO | 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |  |  |    |
|                   | 1  | 115 | 113 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 96  |  |  |    |
|                   | 2  | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 101 | 103 | 100 | 98  | 100 | 98  | 96  | 97  | 96  | 94  | 93  |  |  |    |
|                   | 3  | 107 | 103 | 99  | 96  | 106 | 101 | 98  | 95  | 99  | 96  | 94  | 97  | 94  | 92  | 94  | 93  | 91  | 90  |  |  |    |
|                   | 4  | 104 | 99  | 94  | 91  | 102 | 97  | 94  | 91  | 95  | 92  | 90  | 94  | 91  | 89  | 92  | 90  | 88  | 87  |  |  |    |
|                   | 5  | 101 | 95  | 91  | 88  | 99  | 94  | 90  | 87  | 92  | 89  | 86  | 91  | 88  | 86  | 89  | 87  | 85  | 84  |  |  |    |
|                   | 6  | 98  | 91  | 87  | 84  | 97  | 91  | 87  | 84  | 89  | 86  | 83  | 87  | 85  | 83  | 87  | 84  | 82  | 81  |  |  |    |
|                   | 7  | 95  | 88  | 84  | 81  | 94  | 88  | 84  | 81  | 87  | 83  | 81  | 86  | 83  | 80  | 85  | 82  | 80  | 79  |  |  |    |
|                   | 8  | 92  | 86  | 81  | 79  | 91  | 85  | 81  | 78  | 84  | 81  | 78  | 83  | 80  | 78  | 82  | 80  | 77  | 77  |  |  |    |
|                   | 9  | 90  | 83  | 79  | 76  | 89  | 83  | 79  | 76  | 82  | 78  | 76  | 81  | 78  | 76  | 80  | 77  | 75  | 74  |  |  |    |
| 10                | 87 | 81  | 77  | 74  | 87  | 80  | 76  | 74  | 80  | 76  | 74  | 79  | 76  | 73  | 78  | 75  | 73  | 72  |     |  |  |    |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

**FCM1-LED-1000L-DIM10-120-NFL-30K-90-F-WH-BK(PER HEAD)**

INPUT WATTS: **14.2**

LUMENS: **975**

CRI: **90**

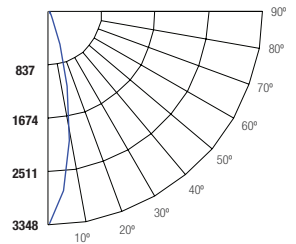
EFFICACY: **69**

CCT: **3000K**

TEST NO.: **EL08252056**

SPACING CRITERIA: **0.50**

**Candle Power Distribution (Candelas)**



**Zonal Lumens Summary**

| Zone | Lumens | %Lamp | %Fixt |
|------|--------|-------|-------|
| 0-20 | 721.35 | 76    | 74    |
| 0-30 | 896.85 | 94.4  | 92    |
| 0-40 | 919.64 | 96.8  | 94.4  |
| 0-60 | 947.94 | 99.8  | 97.3  |
| 0-80 | 961.43 | 101.2 | 98.7  |
| 0-90 | 961.98 | 101.3 | 98.7  |

**Luminance (Average candela/M<sup>2</sup>)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 14005      | 13309       | 12396       |
| 55               | 12532      | 12616       | 11774       |
| 65               | 11773      | 12779       | 10190       |
| 75               | 4432       | 5614        | 2475        |
| 85               | 2852       | 2468        | 2358        |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 272.76 |
| 10-20 | 448.6  |
| 20-30 | 175.49 |
| 30-40 | 22.8   |
| 40-50 | 14.99  |
| 50-60 | 13.31  |
| 60-70 | 10.16  |
| 70-80 | 3.32   |
| 80-90 | 0.56   |

**Candela Tabulation**

| 0  | 0        |
|----|----------|
| 0  | 3311.067 |
| 5  | 3347.66  |
| 15 | 2130.77  |
| 25 | 601.1    |
| 35 | 33.76    |
| 45 | 20.72    |
| 55 | 15.04    |
| 65 | 10.41</  |

**FCM1-LED-1000L-DIM10-120-SP-30K-90-F-WH-BK(PER HEAD)**

TEST NO.: **EL08252056**

INPUT WATTS: **14.1**

LUMENS: **1044**

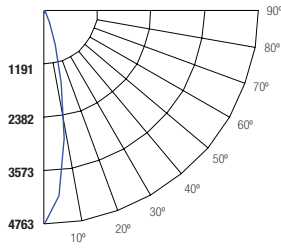
CRI: **90**

EFFICACY: **74**

CCT: **3000K**

SPACING CRITERIA: **0.44**

**Candle Power Distribution (Candelas)**



| Cone of Light                           |       |     |     |  |
|-----------------------------------------|-------|-----|-----|--|
| 2                                       | 1.648 | 0.7 | 0.7 |  |
| 3                                       | 437   | 1.4 | 1.4 |  |
| 5                                       | 191   | 2.1 | 2.1 |  |
| 7                                       | 106   | 2.8 | 2.8 |  |
| 8                                       | 69.1  | 3.4 | 3.5 |  |
| 10                                      | 47.6  | 4.1 | 4.2 |  |
| BEAM DIA. MEASURED AT 50% OF NADIR F.C. |       |     |     |  |

**Zonal Lumens Summary**

| Zone | Lumens  | %Lamp | %Fixt |
|------|---------|-------|-------|
| 0-20 | 819.02  | 81.3  | 78.5  |
| 0-30 | 967.48  | 96    | 92.7  |
| 0-40 | 987.4   | 98    | 94.6  |
| 0-60 | 1015.95 | 100.8 | 97.3  |
| 0-80 | 1029.59 | 102.2 | 98.7  |
| 0-90 | 1030.16 | 102.2 | 98.7  |

**Luminance (Average candela/M²)**

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45               | 12856      | 12369       | 12200       |
| 55               | 12266      | 12382       | 11916       |
| 65               | 11366      | 12372       | 10201       |
| 75               | 3583       | 4931        | 2419        |
| 85               | 2961       | 2632        | 2523        |

**Lumens Per Zone**

| Zone  | Lumens |
|-------|--------|
| 0-10  | 356.42 |
| 10-20 | 462.6  |
| 20-30 | 148.46 |
| 30-40 | 19.91  |
| 40-50 | 15.12  |
| 50-60 | 13.44  |
| 60-70 | 10.27  |
| 70-80 | 3.38   |
| 80-90 | 0.57   |

**Candela Tabulation**

| 0  | 0       |
|----|---------|
| 0  | 4763.36 |
| 5  | 4175.66 |
| 15 | 1652.48 |
| 25 | 277.74  |
| 35 | 29.83   |
| 45 | 19.02   |
| 55 | 14.72   |
| 65 | 10.05   |
| 75 | 1.94    |
| 85 | 0.54    |
| 90 | 0.12    |

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20

| RC                | 80% |     |     |     | 70% |     |     |     | 50% |     |     |     | 30% |     |     |     | 10% |     |     |     | 0%  |     |     |     |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                   | RW  | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% |
| ROOM CAVITY RATIO |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0                 | 123 | 123 | 123 | 123 | 123 | 120 | 120 | 120 | 120 | 114 | 114 | 114 | 109 | 109 | 109 | 104 | 104 | 104 | 104 | 104 | 104 | 102 | 102 | 102 |
| 1                 | 119 | 116 | 114 | 112 | 112 | 116 | 114 | 112 | 110 | 109 | 108 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 100 | 100 | 98  | 98  | 98  | 98  |
| 2                 | 114 | 110 | 107 | 104 | 104 | 112 | 109 | 106 | 103 | 105 | 103 | 101 | 102 | 100 | 98  | 99  | 97  | 96  | 96  | 96  | 95  | 95  | 95  | 95  |
| 3                 | 110 | 105 | 101 | 98  | 98  | 108 | 104 | 100 | 97  | 101 | 98  | 96  | 99  | 96  | 94  | 96  | 94  | 93  | 93  | 93  | 91  | 91  | 91  | 91  |
| 4                 | 107 | 101 | 97  | 93  | 93  | 105 | 100 | 96  | 93  | 98  | 94  | 92  | 96  | 93  | 90  | 94  | 91  | 89  | 88  | 88  | 88  | 88  | 88  | 88  |
| 5                 | 104 | 97  | 93  | 89  | 89  | 102 | 96  | 92  | 89  | 94  | 91  | 88  | 93  | 90  | 87  | 91  | 88  | 86  | 85  | 85  | 85  | 85  | 85  | 85  |
| 6                 | 100 | 94  | 89  | 86  | 86  | 99  | 93  | 89  | 86  | 91  | 88  | 85  | 90  | 87  | 84  | 89  | 86  | 84  | 83  | 83  | 83  | 83  | 83  | 83  |
| 7                 | 98  | 91  | 86  | 83  | 83  | 96  | 90  | 86  | 83  | 89  | 85  | 82  | 87  | 84  | 82  | 86  | 83  | 81  | 80  | 80  | 80  | 80  | 80  | 80  |
| 8                 | 95  | 88  | 83  | 80  | 80  | 94  | 87  | 83  | 80  | 86  | 82  | 80  | 85  | 82  | 79  | 84  | 81  | 79  | 78  | 78  | 78  | 78  | 78  | 78  |
| 9                 | 92  | 85  | 81  | 78  | 78  | 91  | 85  | 81  | 78  | 84  | 80  | 77  | 83  | 80  | 77  | 82  | 79  | 77  | 76  | 76  | 76  | 76  | 76  | 76  |
| 10                | 90  | 83  | 79  | 76  | 76  | 89  | 82  | 78  | 76  | 82  | 78  | 75  | 81  | 77  | 75  | 80  | 77  | 75  | 74  | 74  | 74  | 74  | 74  | 74  |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance