

DESCRIPTION

FPanel LED panel series provides premium performance and pleasing aesthetics while being optimized for shallow plenum grid ceilings or surface mounting. These panels are ideal for new construction as they were developed with Eaton's latest generation of solid state components and electronic driver technologies. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

| | | | |
|--------------------|--|-------------|--|
| Catalog # | | Type | |
| Project | | Date | |
| Comments | | | |
| Prepared by | | | |

SPECIFICATION FEATURES

Construction

- Narrow aluminum bezel is tightly held to code gauge steel back plate
- Seamless corners to maximize the light emitting surface with a refined finish

Mounting

- Integral grid locking clips and separate suspension clips provided for installation flexibility when additional retention is required
- Junction box constructed of code gauge galvanized steel with and easy access hinged door
- Trade size knockouts provided
- Stock luminaire is less than 2" for use in shallow plenum or low ceiling spaces
- Surface or suspension mounting kits available
- IP5X rating options available
- Factory installed flexible cable with dimming leads options available

Controls

- Standard UNV 120 - 277V driver with 0-10V dimming to 10% standard
- Compatible with field installed wireless controls available for either Wavelinx or LumaWatt Pro

Electrical

- Standard and High Efficacy models available
- LED's available in 3000K, 3500K, 4000K, and 5000K with a minimum of 80 CRI
- 90 CRI available with 3000K
- Projected lumen maintenance based on TM21 testing standards is L73 > 60,000 hours
- Emergency battery pack options available in 7w and 14w options
- Battery pack options available as factory installed or field installed for remote mounting

Optical Shielding

- Acrylic light guide with specialized features to optimize light extraction
- White frost lens with smooth pattern for uniform illumination
- Scratch and impact resistant

Compliance

- Indoor luminaires are cULus listed for 25C ambient environments
- IC rated for direct insulation contact
- RoHS compliant
- Damp location listed
- IESNA LM-79 and LM-80 standards compliant
- DesignLights Consortium® Qualified and classified for DLC Standard
- Can be used for State of California Title 24 high efficacy luminaire

Warranty

- Five year warranty.



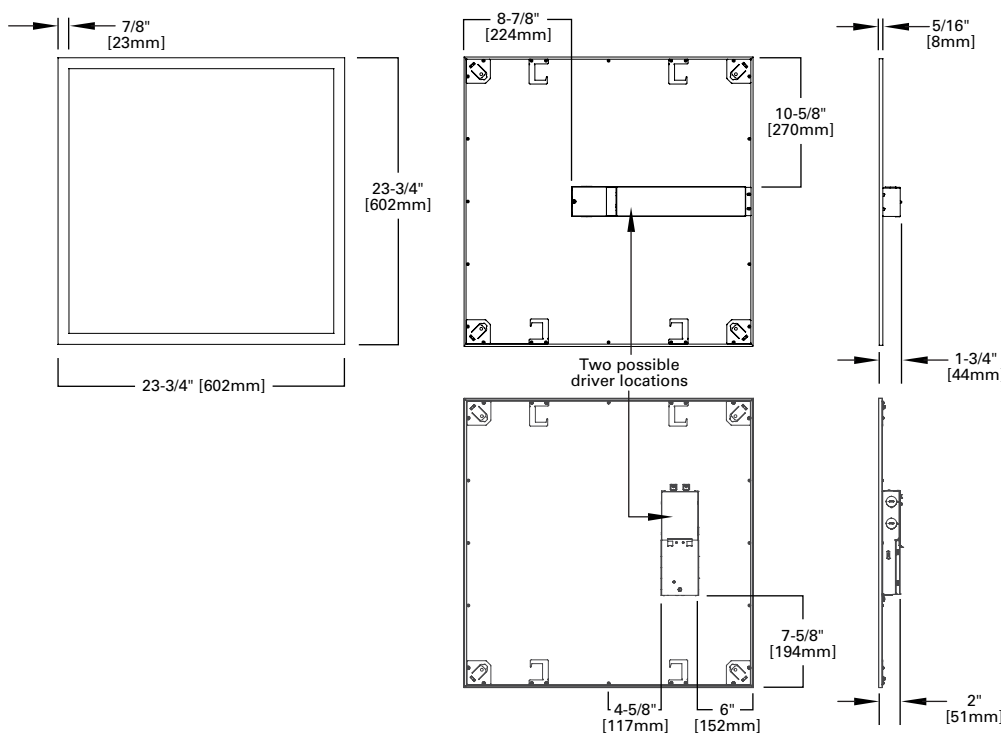
**22FP
LED**

2' X 2' LED PANEL

General Recessed LED Panel for use in Insulated Ceilings or Suspended/Surface Mount



DIMENSIONS



LOAD DATA (STOCK PRODUCT)

| | |
|------------------------|----------|
| Thd | 14% |
| Power Factor | 0.96 |
| Weight | 9.4 lbs. |
| Low Temp. Start | -20°C |

ORDERING INFORMATION/PERFORMANCE

| Catalog | UPC | CCT | CRI (Min) | Delivered Nominal Lumens | Watts | Efficacy (lm/W) | Input Current (A) | |
|---------------------------|--------------|-------|-----------|--------------------------|-------|-----------------|-------------------|------|
| | | | | | | | 120V | 277V |
| 22FP4235C | 080083833580 | 3500K | 80 | 4641 | 38.9 | 119 | .34 | .15 |
| 22FP4240C | 080083833603 | 4000K | 80 | 4567 | 39.3 | 116 | | |
| 22FP4250C | 080083833627 | 5000K | 80 | 4704 | 39.3 | 120 | | |
| 22FP3235C | 080083833528 | 3500K | 80 | 3417 | 29.4 | 116 | .26 | .11 |
| 22FP3240C | 080083833542 | 4000K | 80 | 3560 | 30.0 | 119 | | |
| 22FP3250C | 080083833566 | 5000K | 80 | 3150 | 29.5 | 107 | | |
| 22FP3830C9 ⁽¹⁾ | 080083833801 | 3000K | 90 | 3654 | 39.1 | 93 | .34 | .15 |
| 22FP2830C9 ⁽¹⁾ | 080083833788 | 3000K | 90 | 2734 | 29.5 | 93 | .26 | .11 |
| 22FP2535HE | 080083824090 | 3500K | 80 | 2610 | 20.1 | 130 | .17 | .07 |
| 22FP2540HE | 080083824113 | 4000K | 80 | 2551 | 19.6 | 130 | | |
| 22FP2130C | 080083823994 | 3000K | 80 | 2318 | 20.7 | 112 | .18 | .08 |
| 22FP2135C | 080083824014 | 3500K | 80 | 2205 | 20.7 | 107 | | |
| 22FP2140C | 080083824038 | 4000K | 80 | 2494 | 20.7 | 121 | | |

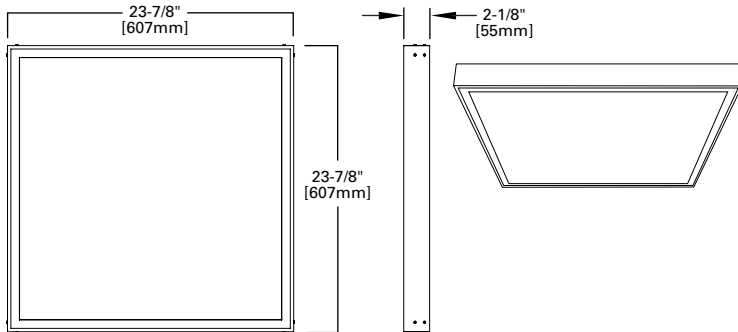
OPTIONS/ORDERING INFORMATION

| |
|--|
| <p>IP5X=IP5X rating Example catalog number=22FP3240C-IP5X</p> |
| <p>EL14W=EBPLED14W battery installed EL7W=EBPLED7W battery installed Example catalog number=22FP3240C-EL14W</p> |
| <p>A3/8-5D/18G=6' 3/8" flex with dimming leads installed ⁽³⁾ Example catalog number=22FP3240C-A3/8-5D/18G</p> |

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT ⁽³⁾

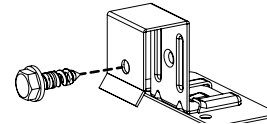
| Catalog | UPC |
|----------|--------------|
| FPSURF22 | 080083802722 |



CEILING RETENTION ⁽²⁾

| Catalog | UPC |
|---------|--------------|
| FPEQ | 080083802685 |

Required by some local codes
 Order one set for each fixture
 (Four clips per kit)



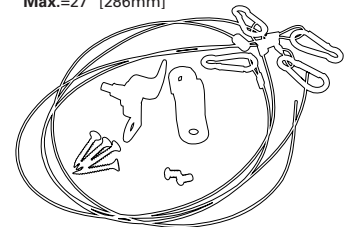
DRYWALL FRAME KIT

| Catalog | UPC |
|----------|--------------|
| DF-22W-U | 662401232963 |

SUSPENSION KIT

| Catalog | UPC |
|---------|--------------|
| FPSUS2 | 080083802784 |

Mounting height from ceiling
Min.=7-1/4" [184mm]
Max.=27" [286mm]



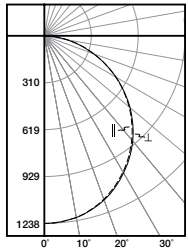
Notes:

- ⁽¹⁾ May have extended lead-times.
- ⁽²⁾ Indicator/test switch to be installed separately. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens).
- ⁽³⁾ May not be used with EL7W or EL14W options

SHIPPING DATA

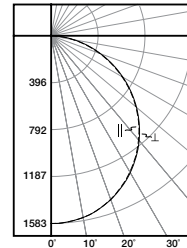
| Size | Wt. | Pallet (30" x 56") |
|---------|---------|--------------------|
| 2' x 2' | 12 lbs. | 34 |

PHOTOMETRICS



22FP3240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (||) 1.25 x mounting
 height, (⊥) 1.26 x
 mounting height
 Lumens: 3560.1
 Input Watts: 30.1W
 Efficacy: 118.3 lm/W
 Test Report:
 22FP3240C.IES

| Candlepower | | | |
|-------------|-------|------|----------|
| Angle | Along | 45° | Across ⊥ |
| 0 | 1238 | 1238 | 1238 |
| 5 | 1233 | 1230 | 1232 |
| 10 | 1217 | 1214 | 1218 |
| 15 | 1187 | 1187 | 1190 |
| 20 | 1148 | 1148 | 1153 |
| 25 | 1097 | 1097 | 1104 |
| 30 | 1038 | 1039 | 1045 |
| 35 | 971 | 973 | 980 |
| 40 | 898 | 900 | 907 |
| 45 | 816 | 821 | 826 |
| 50 | 731 | 735 | 739 |
| 55 | 639 | 644 | 644 |
| 60 | 544 | 547 | 548 |
| 65 | 446 | 448 | 446 |
| 70 | 348 | 349 | 346 |
| 75 | 348 | 349 | 346 |
| 80 | 161 | 156 | 154 |
| 85 | 75 | 71 | 70 |
| 90 | 0 | 0 | 0 |



22FP4240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (||) 1.25 x mounting
 height, (⊥) 1.25 x
 mounting height
 Lumens: 4567.1
 Input Watts: 39.3W
 Efficacy: 116.2 lm/W
 Test Report:
 22FP4240C.IES

| Candlepower | | | |
|-------------|-------|------|----------|
| Angle | Along | 45° | Across ⊥ |
| 0 | 1582 | 1582 | 1582 |
| 5 | 1576 | 1576 | 1576 |
| 10 | 1556 | 1556 | 1556 |
| 15 | 1520 | 1521 | 1521 |
| 20 | 1469 | 1472 | 1472 |
| 25 | 1403 | 1408 | 1408 |
| 30 | 1329 | 1333 | 1336 |
| 35 | 1245 | 1250 | 1251 |
| 40 | 1149 | 1155 | 1157 |
| 45 | 1048 | 1053 | 1054 |
| 50 | 936 | 943 | 944 |
| 55 | 819 | 826 | 826 |
| 60 | 695 | 703 | 703 |
| 65 | 568 | 575 | 577 |
| 70 | 440 | 448 | 450 |
| 75 | 314 | 323 | 326 |
| 80 | 194 | 200 | 205 |
| 85 | 88 | 93 | 94 |
| 90 | 0 | 0 | 0 |

Coefficients of Utilization

| rc rw RCR | Effective floor cavity reflectance 20% | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|
| | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 10% | | | | 0% | |
| | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | |
| 1 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 | | | | |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 | | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 52 | 49 | | | | |
| 5 | 75 | 62 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 52 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 | | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 | | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 | | | | |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 | | | | |

Coefficients of Utilization

| rc rw RCR | Effective floor cavity reflectance 20% | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|
| | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 10% | | | | 0% | |
| | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | |
| 1 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 | | | | |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 | | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 | | | | |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 | | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 | | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 | | | | |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 | | | | |

Zonal Lumen Summary

| Zone | Lumens | % Fixture |
|-------|--------|-----------|
| 0-30 | 958.3 | 26.9 |
| 0-40 | 1567.3 | 44.0 |
| 0-60 | 2773.3 | 77.9 |
| 0-90 | 3560.1 | 100.0 |
| 0-180 | 3560.1 | 100.0 |

Luminance Data

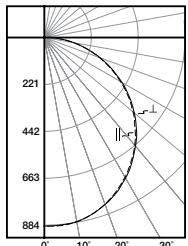
| Angle in Deg | Average 0-Deg cd/sm | Average 45-Deg cd/sm | Average 90-Deg cd/sm |
|--------------|---------------------|----------------------|----------------------|
| 45 | 3105 | 3124 | 3143 |
| 55 | 2998 | 3021 | 3021 |
| 65 | 2840 | 2853 | 2840 |
| 75 | 2620 | 2610 | 2589 |
| 85 | 2316 | 2192 | 2161 |

Zonal Lumen Summary

| Zone | Lumens | % Fixture |
|-------|--------|-----------|
| 0-30 | 1226.4 | 26.9 |
| 0-40 | 2007.1 | 43.9 |
| 0-60 | 3555.3 | 77.8 |
| 0-90 | 4567.1 | 100.0 |
| 0-180 | 4567.1 | 100.0 |

Luminance Data

| Angle in Deg | Average 0-Deg cd/sm | Average 45-Deg cd/sm | Average 90-Deg cd/sm |
|--------------|---------------------|----------------------|----------------------|
| 45 | 3988 | 4007 | 4011 |
| 55 | 3842 | 3875 | 3875 |
| 65 | 3617 | 3661 | 3674 |
| 75 | 3265 | 3358 | 3389 |
| 85 | 2717 | 2871 | 2902 |



22FP2540HE
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (||) 1.25 x mounting
 height, (⊥) 1.26 x
 mounting height
 Lumens: 2551
 Input Watts: 19.6W
 Efficacy: 130.2 LPW
 Test Report:
 22FP2540HE.IES

| Candlepower | | | |
|-------------|-------|-----|----------|
| Angle | Along | 45° | Across ⊥ |
| 0 | 887 | 887 | 887 |
| 5 | 887 | 883 | 883 |
| 10 | 876 | 872 | 874 |
| 15 | 854 | 851 | 855 |
| 20 | 824 | 822 | 827 |
| 25 | 787 | 788 | 792 |
| 30 | 745 | 746 | 750 |
| 35 | 695 | 696 | 700 |
| 40 | 643 | 645 | 649 |
| 45 | 581 | 586 | 592 |
| 50 | 522 | 525 | 530 |
| 55 | 457 | 458 | 464 |
| 60 | 388 | 391 | 395 |
| 65 | 318 | 320 | 325 |
| 70 | 248 | 249 | 252 |
| 75 | 180 | 178 | 180 |
| 80 | 112 | 111 | 114 |
| 85 | 49 | 50 | 49 |
| 90 | 0 | 0 | 0 |

Coefficients of Utilization

| rc rw RCR | Effective floor cavity reflectance 20% | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|
| | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 10% | | | | 0% | |
| | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | |
| 1 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 | | | | |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 | | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 52 | 49 | | | | |
| 5 | 75 | 62 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 52 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 | | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 | | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 | | | | |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 | | | | |

Zonal Lumen Summary

| Zone | Lumens | % Fixture |
|-------|--------|-----------|
| 0-30 | 688 | 27.0 |
| 0-40 | 1124 | 44.1 |
| 0-60 | 1988 | 77.9 |
| 0-90 | 2551 | 100.0 |
| 0-180 | 2551 | 100.0 |

Luminance Data

| Angle in Deg | Average 0-Deg cd/sm | Average 45-Deg cd/sm | Average 90-Deg cd/sm |
|--------------|---------------------|----------------------|----------------------|
| 45 | 2213 | 2230 | 2251 |
| 55 | 2144 | 2152 | 2179 |
| 65 | 2022 | 2040 | 2070 |
| 75 | 1874 | 1854 | 1874 |
| 85 | 1519 | 1550 | 1519 |