

# Family Correlated Photometric Data

The following photometric information is developed using correlated data. Finelite considers a family to be a group of luminaires where critical performance metrics such as photometric performance, thermal performance, and electrical performance can be accurately projected via a combination of LM79 tests at the luminaire level and well-documented specifications at the component level.

For more information, please download [Finelite's Family Correlated White Paper](#)

Additional links:

- [Solid-State Lighting: Early Lessons Learned on the Way to Market](#)  
(U.S. Department of Energy)
- [Lighting Facts®](#)
- [Design Lights Consortium®](#)

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-V-8TW-ITL93249.932.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.932 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]03/20/20

[ISSUEDATE]09/28/20

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE HP-4C-ID-P-18in7-8in-V-V-8TW

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 27.8 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 28.2 WATTS

[\_ABSOLUTE]LUMENS]2714

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL93249. For further details on Finelite family correlation files, go to

[more][http://www.finelite.com/download\\_files/series\\_downloads/photometry\\_pdf/FL\\_Family\\_Correlation\\_WhitePaper.pdf](http://www.finelite.com/download_files/series_downloads/photometry_pdf/FL_Family_Correlation_WhitePaper.pdf)

### CHARACTERISTICS

|                                 |                     |
|---------------------------------|---------------------|
| Lumens Per Lamp                 | N.A. (absolute)     |
| Total Lamp Lumens               | N.A. (absolute)     |
| Luminaire Lumens                | 2714                |
| Total Luminaire Efficiency      | N.A.                |
| Luminaire Efficacy Rating (LER) | 98                  |
| Total Luminaire Watts           | 27.8                |
| Ballast Factor                  | 1.00                |
| CIE Type                        | General Diffuse     |
| Spacing Criterion (0-180)       | N.A.                |
| Spacing Criterion (90-270)      | N.A.                |
| Spacing Criterion (Diagonal)    | N.A.                |
| Basic Luminous Shape            | Rectangular w/Sides |
| Luminous Length (0-180)         | 0.33 ft             |
| Luminous Width (90-270)         | 2.88 ft             |
| Luminous Height                 | 0.02 ft             |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 4544             | 4668              | 4914              |
| 55                  | 4024             | 4176              | 4466              |
| 65                  | 3517             | 3657              | 4030              |
| 75                  | 2991             | 3072              | 3493              |
| 85                  | 2560             | 2512              | 2921              |

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-V-8TW-ITL93249.932.IES

## CANDELA TABULATION

|       | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> |
|-------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| 0.0   | 537.592    | 537.592     | 537.592     | 537.592     | 537.592     | 537.592      | 537.592      | 537.592      | 537.592      |
| 2.5   | 537.127    | 537.127     | 537.592     | 537.127     | 536.662     | 536.662      | 536.662      | 536.197      | 536.197      |
| 5.0   | 534.802    | 534.802     | 534.802     | 534.802     | 534.337     | 533.872      | 533.407      | 532.942      | 532.942      |
| 7.5   | 531.081    | 530.616     | 530.616     | 530.616     | 529.686     | 529.221      | 528.291      | 527.826      | 526.896      |
| 10.0  | 524.106    | 524.571     | 524.571     | 524.571     | 523.641     | 522.711      | 521.780      | 520.850      | 520.385      |
| 12.5  | 516.665    | 516.200     | 516.200     | 516.665     | 516.200     | 514.340      | 513.410      | 511.550      | 511.084      |
| 15.0  | 505.969    | 506.899     | 505.969     | 507.364     | 507.364     | 505.039      | 503.179      | 500.853      | 498.993      |
| 17.5  | 492.948    | 494.343     | 494.343     | 495.738     | 495.738     | 493.413      | 490.157      | 487.832      | 485.972      |
| 20.0  | 479.926    | 481.322     | 481.787     | 482.717     | 483.647     | 480.392      | 477.136      | 472.951      | 472.021      |
| 22.5  | 465.045    | 465.975     | 466.905     | 469.230     | 470.161     | 465.975      | 462.255      | 457.604      | 456.674      |
| 25.0  | 449.233    | 450.164     | 451.094     | 454.349     | 454.349     | 451.094      | 446.908      | 440.863      | 438.537      |
| 27.5  | 431.562    | 432.027     | 434.352     | 437.607     | 438.072     | 434.352      | 428.772      | 424.121      | 421.331      |
| 30.0  | 413.890    | 414.820     | 417.610     | 419.936     | 421.331     | 416.680      | 411.565      | 405.054      | 404.124      |
| 32.5  | 393.893    | 396.683     | 398.544     | 402.729     | 403.659     | 398.079      | 393.893      | 386.917      | 384.592      |
| 35.0  | 374.826    | 376.687     | 379.477     | 383.662     | 383.662     | 379.942      | 374.361      | 368.316      | 365.525      |
| 37.5  | 355.759    | 357.620     | 360.410     | 364.130     | 365.060     | 361.805      | 355.294      | 349.249      | 346.924      |
| 40.0  | 336.693    | 337.623     | 340.413     | 345.528     | 346.459     | 342.273      | 336.693      | 328.787      | 326.462      |
| 42.5  | 315.300    | 317.161     | 320.881     | 325.531     | 326.462     | 323.671      | 317.161      | 310.185      | 307.395      |
| 45.0  | 295.304    | 297.164     | 300.419     | 304.604     | 306.465     | 303.674      | 296.234      | 290.188      | 287.863      |
| 47.5  | 275.772    | 277.167     | 280.422     | 285.073     | 286.468     | 283.212      | 276.237      | 270.191      | 268.796      |
| 50.0  | 255.310    | 258.100     | 260.890     | 266.006     | 266.936     | 263.680      | 256.705      | 251.124      | 248.799      |
| 52.5  | 236.243    | 237.638     | 240.893     | 246.009     | 246.939     | 244.149      | 238.103      | 231.592      | 231.592      |
| 55.0  | 216.246    | 218.571     | 221.361     | 225.082     | 226.477     | 225.082      | 218.571      | 213.456      | 211.595      |
| 57.5  | 198.109    | 199.969     | 201.364     | 206.015     | 207.410     | 204.620      | 198.574      | 194.854      | 193.459      |
| 60.0  | 179.972    | 180.438     | 182.763     | 186.948     | 188.808     | 186.483      | 180.903      | 176.252      | 174.392      |
| 62.5  | 162.301    | 162.766     | 164.161     | 168.346     | 169.276     | 167.416      | 162.301      | 159.045      | 157.185      |
| 65.0  | 143.699    | 144.629     | 146.489     | 148.814     | 151.140     | 148.814      | 145.094      | 141.374      | 140.444      |
| 67.5  | 127.422    | 128.352     | 128.352     | 131.143     | 132.538     | 131.608      | 126.492      | 124.632      | 124.167      |
| 70.0  | 111.146    | 111.611     | 110.681     | 113.936     | 114.401     | 113.471      | 110.216      | 108.820      | 107.425      |
| 72.5  | 95.799     | 95.334      | 94.869      | 96.729      | 97.194      | 97.194       | 94.404       | 93.009       | 92.079       |
| 75.0  | 79.988     | 80.453      | 79.523      | 79.988      | 80.918      | 80.918       | 79.523       | 77.662       | 78.128       |
| 77.5  | 66.501     | 66.501      | 64.176      | 65.106      | 64.176      | 65.571       | 64.176       | 64.176       | 64.641       |
| 80.0  | 53.480     | 53.480      | 50.690      | 51.155      | 49.295      | 51.620       | 50.690       | 51.620       | 51.155       |
| 82.5  | 41.854     | 40.924      | 38.599      | 38.134      | 36.273      | 38.134       | 38.599       | 39.529       | 39.994       |
| 85.0  | 30.228     | 29.763      | 27.438      | 25.578      | 23.717      | 26.043       | 27.438       | 28.368       | 29.298       |
| 87.5  | 20.927     | 19.997      | 16.277      | 15.347      | 12.556      | 14.416       | 16.742       | 19.067       | 19.997       |
| 90.0  | 14.416     | 13.486      | 10.231      | 8.371       | 5.580       | 6.976        | 9.301        | 12.556       | 13.486       |
| 92.5  | 19.997     | 19.067      | 16.742      | 13.951      | 12.091      | 12.556       | 15.812       | 18.137       | 19.532       |
| 95.0  | 31.623     | 30.693      | 27.903      | 25.112      | 24.182      | 23.717       | 26.973       | 29.298       | 30.693       |
| 97.5  | 44.644     | 44.179      | 40.924      | 37.669      | 36.739      | 36.739       | 39.064       | 41.854       | 42.784       |
| 100.0 | 59.991     | 58.596      | 55.340      | 53.015      | 50.690      | 51.155       | 52.550       | 55.340       | 56.736       |
| 102.5 | 74.872     | 73.477      | 71.152      | 68.362      | 66.036      | 66.501       | 68.362       | 69.757       | 71.152       |
| 105.0 | 90.684     | 89.754      | 86.963      | 85.103      | 82.778      | 82.778       | 83.708       | 86.963       | 86.963       |
| 107.5 | 107.425    | 106.960     | 104.170     | 101.845     | 99.985      | 101.380      | 100.450      | 102.775      | 103.240      |
| 110.0 | 124.632    | 125.097     | 121.377     | 120.912     | 119.052     | 119.517      | 117.191      | 119.517      | 121.377      |
| 112.5 | 143.699    | 142.769     | 140.444     | 140.909     | 138.118     | 137.653      | 136.258      | 138.583      | 139.048      |
| 115.0 | 161.836    | 160.906     | 159.510     | 159.045     | 157.185     | 155.790      | 156.255      | 157.185      | 156.720      |
| 117.5 | 180.438    | 179.507     | 179.042     | 177.647     | 177.182     | 174.857      | 174.857      | 175.787      | 175.322      |
| 120.0 | 199.039    | 200.434     | 199.039     | 197.644     | 196.714     | 195.784      | 193.924      | 194.854      | 192.994      |
| 122.5 | 219.966    | 221.361     | 219.501     | 217.176     | 217.176     | 215.316      | 213.921      | 214.386      | 212.060      |
| 125.0 | 239.963    | 241.823     | 240.893     | 237.173     | 236.708     | 235.313      | 234.383      | 232.523      | 231.127      |
| 127.5 | 259.030    | 262.750     | 260.890     | 259.495     | 256.705     | 253.915      | 253.450      | 250.659      | 250.194      |
| 130.0 | 279.492    | 283.678     | 280.887     | 280.422     | 278.562     | 274.377      | 272.516      | 271.121      | 269.726      |
| 132.5 | 301.349    | 304.139     | 301.349     | 300.419     | 298.559     | 294.373      | 291.583      | 290.653      | 288.793      |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-V-8TW-ITL93249.932.IES****CANDELA TABULATION - (Cont.)**

|              |         |         |         |         |         |         |         |         |         |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>135.0</b> | 321.346 | 323.671 | 322.276 | 320.416 | 319.486 | 315.300 | 312.045 | 311.115 | 310.185 |
| <b>137.5</b> | 341.343 | 343.203 | 343.203 | 340.413 | 339.018 | 334.832 | 332.507 | 330.647 | 329.717 |
| <b>140.0</b> | 362.735 | 362.735 | 362.270 | 360.875 | 359.015 | 355.294 | 351.574 | 350.644 | 348.784 |
| <b>142.5</b> | 381.337 | 381.802 | 381.337 | 379.942 | 379.942 | 374.826 | 371.571 | 369.711 | 367.851 |
| <b>145.0</b> | 399.474 | 399.939 | 399.939 | 398.079 | 399.009 | 393.428 | 391.103 | 388.778 | 387.848 |
| <b>147.5</b> | 418.541 | 418.075 | 417.145 | 415.285 | 416.680 | 411.565 | 408.775 | 407.379 | 405.984 |
| <b>150.0</b> | 434.817 | 434.817 | 434.352 | 432.957 | 433.422 | 428.772 | 426.911 | 425.516 | 423.191 |
| <b>152.5</b> | 450.164 | 451.094 | 449.699 | 448.768 | 449.699 | 445.978 | 443.188 | 441.793 | 439.467 |
| <b>155.0</b> | 465.510 | 466.440 | 464.580 | 463.650 | 465.045 | 461.325 | 458.534 | 457.604 | 456.209 |
| <b>157.5</b> | 478.996 | 479.926 | 478.066 | 476.671 | 478.531 | 474.811 | 473.881 | 472.486 | 470.625 |
| <b>160.0</b> | 490.157 | 491.087 | 489.692 | 489.692 | 490.157 | 487.367 | 486.437 | 485.507 | 483.647 |
| <b>162.5</b> | 500.388 | 501.784 | 501.318 | 499.923 | 501.318 | 499.458 | 498.528 | 497.598 | 496.668 |
| <b>165.0</b> | 510.154 | 511.084 | 510.619 | 509.689 | 511.084 | 508.759 | 508.294 | 507.829 | 506.899 |
| <b>167.5</b> | 518.990 | 518.525 | 518.525 | 518.060 | 518.990 | 518.060 | 517.595 | 517.130 | 516.665 |
| <b>170.0</b> | 525.501 | 525.501 | 525.036 | 525.966 | 525.501 | 524.571 | 524.571 | 524.571 | 524.571 |
| <b>172.5</b> | 531.081 | 530.616 | 530.616 | 531.081 | 530.616 | 530.616 | 530.616 | 530.151 | 530.151 |
| <b>175.0</b> | 534.802 | 534.337 | 534.337 | 534.337 | 534.337 | 534.337 | 534.337 | 534.337 | 534.802 |
| <b>177.5</b> | 536.662 | 536.662 | 536.662 | 536.662 | 536.662 | 536.662 | 536.662 | 536.662 | 536.662 |
| <b>180.0</b> | 537.592 | 537.592 | 537.592 | 537.592 | 537.592 | 537.592 | 537.592 | 537.592 | 537.592 |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-V-8TW-ITL93249.932.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 192.70  | N.A.  | 7.10   |
| 0-30    | 399.28  | N.A.  | 14.70  |
| 0-40    | 635.18  | N.A.  | 23.40  |
| 0-60    | 1063.07 | N.A.  | 39.20  |
| 0-80    | 1292.78 | N.A.  | 47.60  |
| 0-90    | 1323.74 | N.A.  | 48.80  |
| 10-90   | 1273.11 | N.A.  | 46.90  |
| 20-40   | 442.48  | N.A.  | 16.30  |
| 20-50   | 673.15  | N.A.  | 24.80  |
| 40-70   | 572.81  | N.A.  | 21.10  |
| 60-80   | 229.71  | N.A.  | 8.50   |
| 70-80   | 84.79   | N.A.  | 3.10   |
| 80-90   | 30.96   | N.A.  | 1.10   |
| 90-110  | 122.72  | N.A.  | 4.50   |
| 90-120  | 279.45  | N.A.  | 10.30  |
| 90-130  | 491.19  | N.A.  | 18.10  |
| 90-150  | 983.23  | N.A.  | 36.20  |
| 90-180  | 1390.26 | N.A.  | 51.20  |
| 110-180 | 1267.54 | N.A.  | 46.70  |
| 0-180   | 2714.00 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 50.63  |
| 10-20   | 142.07 |
| 20-30   | 206.59 |
| 30-40   | 235.89 |
| 40-50   | 230.67 |
| 50-60   | 197.22 |
| 60-70   | 144.92 |
| 70-80   | 84.79  |
| 80-90   | 30.96  |
| 90-100  | 31.50  |
| 100-110 | 91.21  |
| 110-120 | 156.73 |
| 120-130 | 211.75 |
| 130-140 | 244.86 |
| 140-150 | 247.18 |
| 150-160 | 212.69 |
| 160-170 | 143.62 |
| 170-180 | 50.72  |

# IES INDOOR REPORT

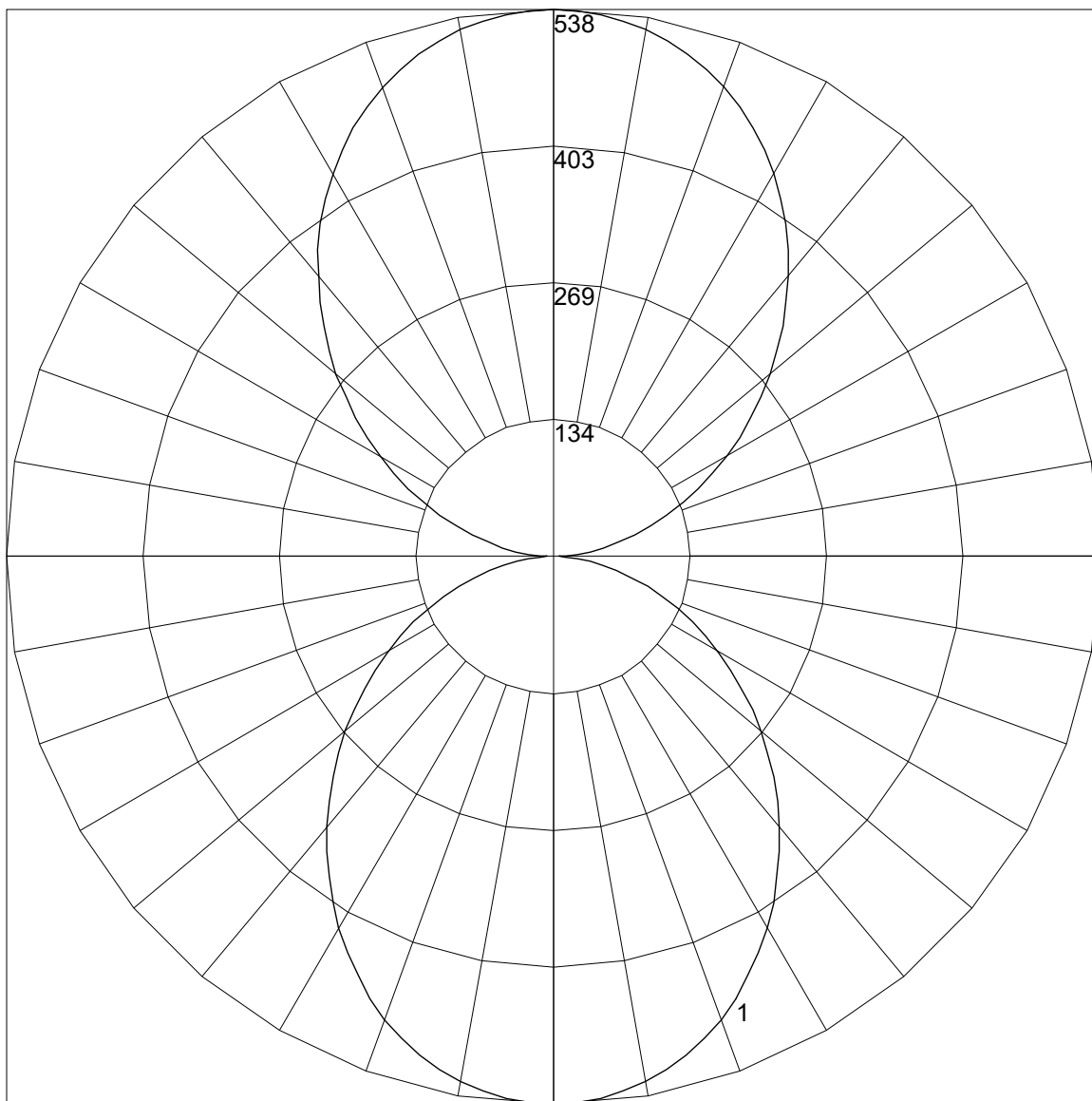
PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-V-8TW-ITL93249.932.IES

## 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 | 0  |
| 0  | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 83 | 83 | 83 | 68 | 68 | 68 | 55 | 55 | 55 | 49 |
| 1  | 97  | 93  | 89  | 86  | 90 | 86 | 83 | 80 | 72 | 70 | 68 | 60 | 58 | 57 | 49 | 47 | 46 | 41 |
| 2  | 89  | 81  | 75  | 70  | 82 | 75 | 70 | 65 | 63 | 60 | 56 | 53 | 50 | 47 | 43 | 41 | 39 | 34 |
| 3  | 81  | 72  | 64  | 58  | 74 | 66 | 60 | 55 | 56 | 51 | 47 | 47 | 43 | 40 | 38 | 35 | 33 | 29 |
| 4  | 74  | 63  | 56  | 49  | 68 | 59 | 52 | 46 | 50 | 45 | 40 | 42 | 38 | 35 | 34 | 31 | 29 | 25 |
| 5  | 68  | 57  | 48  | 42  | 63 | 52 | 45 | 40 | 45 | 39 | 35 | 37 | 33 | 30 | 31 | 28 | 25 | 22 |
| 6  | 63  | 51  | 43  | 37  | 58 | 47 | 40 | 35 | 40 | 35 | 30 | 34 | 30 | 26 | 28 | 25 | 22 | 19 |
| 7  | 58  | 46  | 38  | 32  | 53 | 43 | 36 | 31 | 37 | 31 | 27 | 31 | 27 | 23 | 25 | 22 | 20 | 17 |
| 8  | 54  | 42  | 34  | 29  | 50 | 39 | 32 | 27 | 33 | 28 | 24 | 28 | 24 | 21 | 23 | 20 | 18 | 15 |
| 9  | 50  | 38  | 31  | 26  | 46 | 35 | 29 | 24 | 31 | 25 | 21 | 26 | 22 | 19 | 22 | 18 | 16 | 14 |
| 10 | 47  | 35  | 28  | 23  | 43 | 33 | 26 | 22 | 28 | 23 | 19 | 24 | 20 | 17 | 20 | 17 | 15 | 13 |

POLAR GRAPH



Maximum Candela = 537.592 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)