



IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZUS-PRO-22-LED4-MO.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L101409101
 [TESTLAB]
 [ISSUEDATE]
 [MANUFAC] PRUDENTIAL LTG.
 [LUMCAT] ZDS-22-LED4-MO
 [LUMINAIRE] 26"SQ. X 3"H. LED LUMINAIRE
 [MORE] DIFFUSED LENS
 [BALLASTCAT] OSRAM OPTOTRONIC
 [BALLAST] INPUT: 120-277VAC
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC,
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 7002 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 135 |
| Total Luminaire Watts | 52 |
| Ballast Factor | 1.00 |
| CIE Type | Semi-Indirect |
| 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) | 2.17 ft |
| Luminous Width (90-270) | 2.17 ft |
| Luminous Height | 0.10 ft |

IES INDOOR REPORT
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LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 287 | 351 | 282 |
| 55 | 396 | 505 | 396 |
| 65 | 601 | 796 | 641 |
| 75 | 969 | 1215 | 1068 |
| 85 | 2658 | 2692 | 1986 |

IES INDOOR REPORT
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CANDELA TABULATION

| | <u>0</u> | <u>5</u> | <u>10</u> | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>35</u> | <u>40</u> | <u>45</u> |
|------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 34.23 | 34.23 | 34.23 | 34.23 | 34.23 | 34.23 | 32.60 | 32.60 | 32.60 | 32.60 |
| 10 | 39.12 | 39.12 | 40.75 | 40.75 | 40.75 | 40.75 | 39.12 | 39.12 | 39.12 | 39.12 |
| 15 | 47.27 | 47.27 | 47.27 | 47.27 | 48.90 | 48.90 | 48.90 | 48.90 | 48.90 | 48.90 |
| 20 | 53.79 | 53.79 | 53.79 | 55.42 | 55.42 | 57.05 | 58.68 | 58.68 | 60.31 | 60.31 |
| 25 | 60.31 | 61.94 | 61.94 | 63.57 | 65.20 | 66.83 | 66.83 | 66.83 | 68.46 | 68.46 |
| 30 | 68.46 | 68.46 | 70.09 | 73.35 | 74.98 | 76.61 | 78.24 | 78.24 | 78.24 | 78.24 |
| 35 | 78.24 | 79.87 | 81.50 | 83.13 | 84.76 | 88.02 | 89.65 | 89.65 | 91.28 | 91.28 |
| 40 | 84.76 | 86.39 | 88.02 | 92.91 | 96.17 | 99.43 | 101.06 | 102.69 | 104.32 | 105.95 |
| 45 | 92.91 | 94.54 | 97.80 | 101.06 | 104.32 | 107.58 | 112.47 | 115.73 | 117.36 | 115.73 |
| 50 | 97.80 | 99.43 | 102.69 | 107.58 | 112.47 | 117.36 | 120.62 | 123.88 | 125.51 | 127.14 |
| 55 | 105.95 | 107.58 | 110.84 | 115.73 | 120.62 | 127.14 | 132.03 | 135.29 | 136.92 | 138.55 |
| 60 | 117.36 | 118.99 | 123.88 | 128.77 | 133.66 | 138.55 | 143.44 | 148.33 | 151.59 | 151.59 |
| 65 | 122.25 | 123.88 | 130.40 | 138.55 | 145.07 | 153.22 | 158.11 | 163.00 | 166.26 | 167.89 |
| 70 | 101.06 | 104.32 | 112.47 | 122.25 | 133.66 | 145.07 | 156.48 | 166.26 | 174.41 | 177.67 |
| 75 | 128.77 | 132.03 | 136.92 | 143.44 | 151.59 | 156.48 | 161.37 | 163.00 | 164.63 | 171.15 |
| 80 | 166.26 | 166.26 | 171.15 | 177.67 | 184.19 | 190.71 | 195.60 | 198.86 | 200.49 | 195.60 |
| 85 | 154.85 | 156.48 | 159.74 | 166.26 | 172.78 | 177.67 | 182.56 | 184.19 | 182.56 | 179.30 |
| 90 | 143.44 | 145.07 | 149.96 | 158.11 | 166.26 | 172.78 | 179.30 | 185.82 | 187.45 | 187.45 |
| 95 | 301.55 | 304.81 | 311.33 | 319.48 | 329.26 | 339.04 | 347.19 | 353.71 | 356.97 | 356.97 |
| 100 | 407.50 | 412.39 | 423.80 | 435.21 | 448.25 | 461.29 | 471.07 | 477.59 | 482.48 | 480.85 |
| 105 | 534.64 | 539.53 | 550.94 | 562.35 | 575.39 | 586.80 | 594.95 | 601.47 | 604.73 | 603.10 |
| 110 | 676.45 | 679.71 | 691.12 | 700.90 | 710.68 | 718.83 | 725.35 | 730.24 | 731.87 | 728.61 |
| 115 | 818.26 | 821.52 | 831.30 | 839.45 | 847.60 | 852.49 | 854.12 | 855.75 | 854.12 | 850.86 |
| 120 | 955.18 | 956.81 | 966.59 | 971.48 | 974.74 | 974.74 | 974.74 | 973.11 | 969.85 | 966.59 |
| 125 | 1067.65 | 1069.28 | 1075.80 | 1079.06 | 1079.06 | 1077.43 | 1072.54 | 1069.28 | 1064.39 | 1062.76 |
| 130 | 1181.75 | 1181.75 | 1186.64 | 1188.27 | 1188.27 | 1183.38 | 1178.49 | 1173.60 | 1168.71 | 1165.45 |
| 135 | 1290.96 | 1290.96 | 1295.85 | 1295.85 | 1294.22 | 1289.33 | 1282.81 | 1279.55 | 1274.66 | 1271.40 |
| 140 | 1398.54 | 1400.17 | 1401.80 | 1403.43 | 1401.80 | 1396.91 | 1393.65 | 1390.39 | 1385.50 | 1385.50 |
| 145 | 1507.75 | 1509.38 | 1512.64 | 1514.27 | 1514.27 | 1512.64 | 1509.38 | 1507.75 | 1506.12 | 1506.12 |
| 150 | 1625.11 | 1625.11 | 1626.74 | 1630.00 | 1631.63 | 1633.26 | 1631.63 | 1633.26 | 1631.63 | 1631.63 |
| 155 | 1744.10 | 1744.10 | 1745.73 | 1748.99 | 1752.25 | 1753.88 | 1753.88 | 1755.51 | 1755.51 | 1755.51 |
| 160 | 1861.46 | 1859.83 | 1859.83 | 1859.83 | 1863.09 | 1866.35 | 1867.98 | 1867.98 | 1867.98 | 1869.61 |
| 165 | 1954.37 | 1956.00 | 1954.37 | 1954.37 | 1959.26 | 1962.52 | 1962.52 | 1962.52 | 1962.52 | 1962.52 |
| 170 | 2022.83 | 2021.20 | 2022.83 | 2022.83 | 2024.46 | 2024.46 | 2022.83 | 2022.83 | 2022.83 | 2024.46 |
| 175 | 2058.69 | 2058.69 | 2058.69 | 2058.69 | 2060.32 | 2060.32 | 2058.69 | 2057.06 | 2057.06 | 2057.06 |
| 180 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 |

**Vert.
Angles**

Horizontal Angles

| | <u>50</u> | <u>55</u> | <u>60</u> | <u>65</u> | <u>70</u> | <u>75</u> | <u>80</u> | <u>85</u> | <u>90</u> |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 32.60 | 32.60 | 32.60 | 34.23 | 34.23 | 34.23 | 34.23 | 34.23 | 34.23 |
| 10 | 39.12 | 39.12 | 39.12 | 39.12 | 39.12 | 39.12 | 39.12 | 39.12 | 39.12 |
| 15 | 48.90 | 48.90 | 48.90 | 48.90 | 47.27 | 47.27 | 47.27 | 47.27 | 45.64 |
| 20 | 60.31 | 58.68 | 58.68 | 57.05 | 55.42 | 55.42 | 53.79 | 53.79 | 52.16 |
| 25 | 68.46 | 66.83 | 66.83 | 65.20 | 65.20 | 63.57 | 61.94 | 60.31 | 60.31 |
| 30 | 78.24 | 78.24 | 76.61 | 74.98 | 74.98 | 71.72 | 70.09 | 68.46 | 68.46 |
| 35 | 91.28 | 89.65 | 89.65 | 86.39 | 84.76 | 83.13 | 79.87 | 78.24 | 76.61 |
| 40 | 104.32 | 102.69 | 101.06 | 99.43 | 96.17 | 91.28 | 88.02 | 84.76 | 83.13 |
| 45 | 117.36 | 115.73 | 112.47 | 109.21 | 104.32 | 99.43 | 96.17 | 92.91 | 91.28 |
| 50 | 127.14 | 125.51 | 122.25 | 118.99 | 112.47 | 107.58 | 102.69 | 99.43 | 96.17 |
| 55 | 138.55 | 136.92 | 133.66 | 128.77 | 123.88 | 117.36 | 112.47 | 107.58 | 105.95 |
| 60 | 151.59 | 149.96 | 145.07 | 141.81 | 136.92 | 130.40 | 125.51 | 120.62 | 118.99 |

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

| | | | | | | | | | |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 65 | 167.89 | 166.26 | 163.00 | 158.11 | 151.59 | 143.44 | 136.92 | 132.03 | 130.40 |
| 70 | 177.67 | 177.67 | 174.41 | 167.89 | 159.74 | 151.59 | 143.44 | 136.92 | 135.29 |
| 75 | 176.04 | 180.93 | 177.67 | 172.78 | 164.63 | 156.48 | 148.33 | 143.44 | 141.81 |
| 80 | 189.08 | 180.93 | 174.41 | 171.15 | 167.89 | 161.37 | 156.48 | 151.59 | 149.96 |
| 85 | 172.78 | 164.63 | 154.85 | 146.70 | 138.55 | 130.40 | 122.25 | 117.36 | 115.73 |
| 90 | 185.82 | 180.93 | 174.41 | 164.63 | 156.48 | 146.70 | 138.55 | 133.66 | 132.03 |
| 95 | 352.08 | 343.93 | 334.15 | 321.11 | 308.07 | 295.03 | 283.62 | 275.47 | 272.21 |
| 100 | 475.96 | 466.18 | 453.14 | 438.47 | 422.17 | 405.87 | 389.57 | 378.16 | 373.27 |
| 105 | 598.21 | 588.43 | 575.39 | 560.72 | 544.42 | 528.12 | 513.45 | 500.41 | 495.52 |
| 110 | 723.72 | 715.57 | 704.16 | 692.75 | 679.71 | 665.04 | 652.00 | 638.96 | 634.07 |
| 115 | 847.60 | 841.08 | 834.56 | 826.41 | 816.63 | 805.22 | 793.81 | 782.40 | 779.14 |
| 120 | 963.33 | 960.07 | 956.81 | 953.55 | 948.66 | 942.14 | 933.99 | 924.21 | 922.58 |
| 125 | 1061.13 | 1059.50 | 1059.50 | 1059.50 | 1059.50 | 1056.24 | 1051.35 | 1043.20 | 1041.57 |
| 130 | 1165.45 | 1167.08 | 1170.34 | 1173.60 | 1175.23 | 1175.23 | 1171.97 | 1167.08 | 1165.45 |
| 135 | 1273.03 | 1276.29 | 1281.18 | 1284.44 | 1289.33 | 1290.96 | 1289.33 | 1286.07 | 1286.07 |
| 140 | 1387.13 | 1388.76 | 1393.65 | 1398.54 | 1401.80 | 1405.06 | 1403.43 | 1401.80 | 1401.80 |
| 145 | 1507.75 | 1511.01 | 1512.64 | 1517.53 | 1519.16 | 1519.16 | 1517.53 | 1515.90 | 1515.90 |
| 150 | 1633.26 | 1636.52 | 1636.52 | 1638.15 | 1639.78 | 1636.52 | 1633.26 | 1631.63 | 1633.26 |
| 155 | 1757.14 | 1758.77 | 1758.77 | 1757.14 | 1757.14 | 1753.88 | 1753.88 | 1752.25 | 1752.25 |
| 160 | 1869.61 | 1869.61 | 1871.24 | 1869.61 | 1866.35 | 1863.09 | 1864.72 | 1866.35 | 1867.98 |
| 165 | 1962.52 | 1962.52 | 1964.15 | 1964.15 | 1960.89 | 1959.26 | 1957.63 | 1957.63 | 1957.63 |
| 170 | 2022.83 | 2024.46 | 2024.46 | 2026.09 | 2026.09 | 2026.09 | 2026.09 | 2024.46 | 2024.46 |
| 175 | 2057.06 | 2058.69 | 2060.32 | 2061.95 | 2061.95 | 2060.32 | 2060.32 | 2060.32 | 2060.32 |
| 180 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 | 2068.47 |

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 16.85 | N.A. | 0.20 |
| 0-30 | 47.22 | N.A. | 0.70 |
| 0-40 | 101.06 | N.A. | 1.40 |
| 0-60 | 294.76 | N.A. | 4.20 |
| 0-80 | 610.18 | N.A. | 8.70 |
| 0-90 | 789.45 | N.A. | 11.30 |
| 10-90 | 786.44 | N.A. | 11.20 |
| 20-40 | 84.21 | N.A. | 1.20 |
| 20-50 | 166.01 | N.A. | 2.40 |
| 40-70 | 339.12 | N.A. | 4.80 |
| 60-80 | 315.41 | N.A. | 4.50 |
| 70-80 | 170.00 | N.A. | 2.40 |
| 80-90 | 179.27 | N.A. | 2.60 |
| 90-110 | 938.57 | N.A. | 13.40 |
| 90-120 | 1760.32 | N.A. | 25.10 |
| 90-130 | 2714.72 | N.A. | 38.80 |
| 90-150 | 4656.98 | N.A. | 66.50 |
| 90-180 | 6212.21 | N.A. | 88.70 |
| 110-180 | 5273.64 | N.A. | 75.30 |
| 0-180 | 7001.66 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 3.02 |
| 10-20 | 13.83 |
| 20-30 | 30.38 |
| 30-40 | 53.84 |
| 40-50 | 81.80 |
| 50-60 | 111.91 |
| 60-70 | 145.41 |
| 70-80 | 170.00 |
| 80-90 | 179.27 |
| 90-100 | 340.70 |
| 100-110 | 597.87 |
| 110-120 | 821.75 |
| 120-130 | 954.40 |
| 130-140 | 993.73 |
| 140-150 | 948.53 |
| 150-160 | 808.15 |
| 160-170 | 551.66 |
| 170-180 | 195.42 |

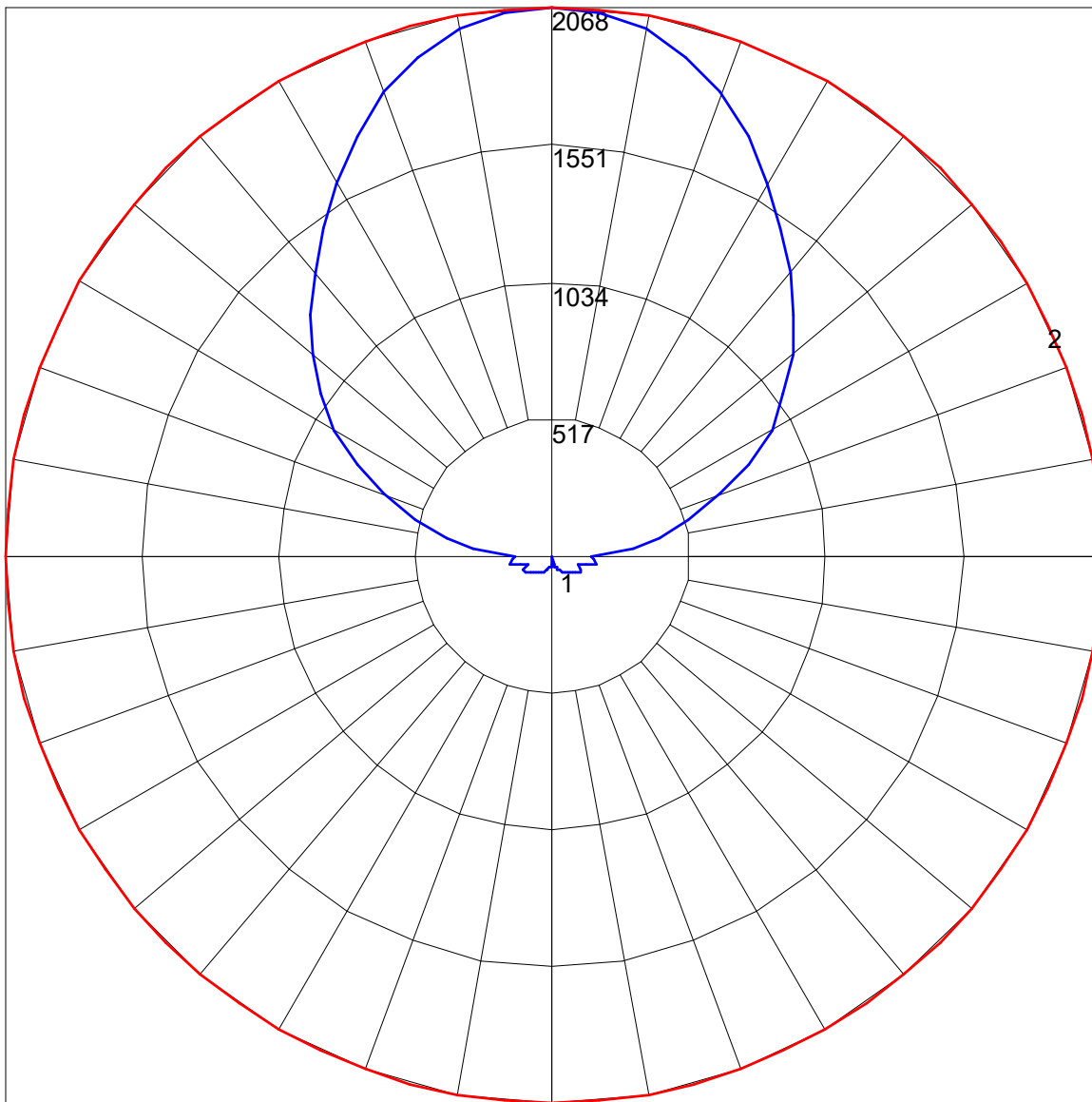
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 98 | 98 | 98 | 98 | 85 | 85 | 85 | 85 | 62 | 62 | 62 | 40 | 40 | 40 | 21 | 21 | 21 | 11 |
| 1 | 88 | 83 | 79 | 75 | 76 | 72 | 69 | 66 | 52 | 50 | 48 | 33 | 32 | 31 | 16 | 15 | 15 | 7 |
| 2 | 79 | 72 | 66 | 60 | 69 | 62 | 57 | 53 | 45 | 41 | 38 | 28 | 26 | 25 | 13 | 12 | 11 | 5 |
| 3 | 72 | 63 | 55 | 49 | 62 | 54 | 48 | 43 | 39 | 35 | 32 | 25 | 22 | 20 | 11 | 10 | 9 | 3 |
| 4 | 66 | 55 | 47 | 41 | 57 | 48 | 41 | 36 | 34 | 30 | 26 | 22 | 19 | 17 | 10 | 9 | 7 | 3 |
| 5 | 60 | 49 | 41 | 35 | 52 | 42 | 36 | 31 | 30 | 26 | 22 | 19 | 16 | 14 | 9 | 7 | 6 | 2 |
| 6 | 55 | 43 | 35 | 30 | 47 | 38 | 31 | 26 | 27 | 22 | 19 | 17 | 14 | 12 | 8 | 6 | 5 | 2 |
| 7 | 50 | 39 | 31 | 26 | 44 | 34 | 27 | 22 | 24 | 20 | 16 | 15 | 13 | 10 | 7 | 6 | 5 | 1 |
| 8 | 47 | 35 | 27 | 22 | 40 | 30 | 24 | 20 | 22 | 17 | 14 | 14 | 11 | 9 | 6 | 5 | 4 | 1 |
| 9 | 43 | 31 | 24 | 19 | 37 | 27 | 21 | 17 | 20 | 15 | 12 | 13 | 10 | 8 | 6 | 4 | 3 | 1 |
| 10 | 40 | 29 | 22 | 17 | 35 | 25 | 19 | 15 | 18 | 14 | 11 | 11 | 9 | 7 | 5 | 4 | 3 | 1 |

POLAR GRAPH



Maximum Candela = 2068.47 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)