

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P893291

Luminaire Tested: 4MB-2SL-FLTU-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893291
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2403-327-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-2SL-FLTU-UNV-L840
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 400
Light Source: -
Ballast/Driver: -

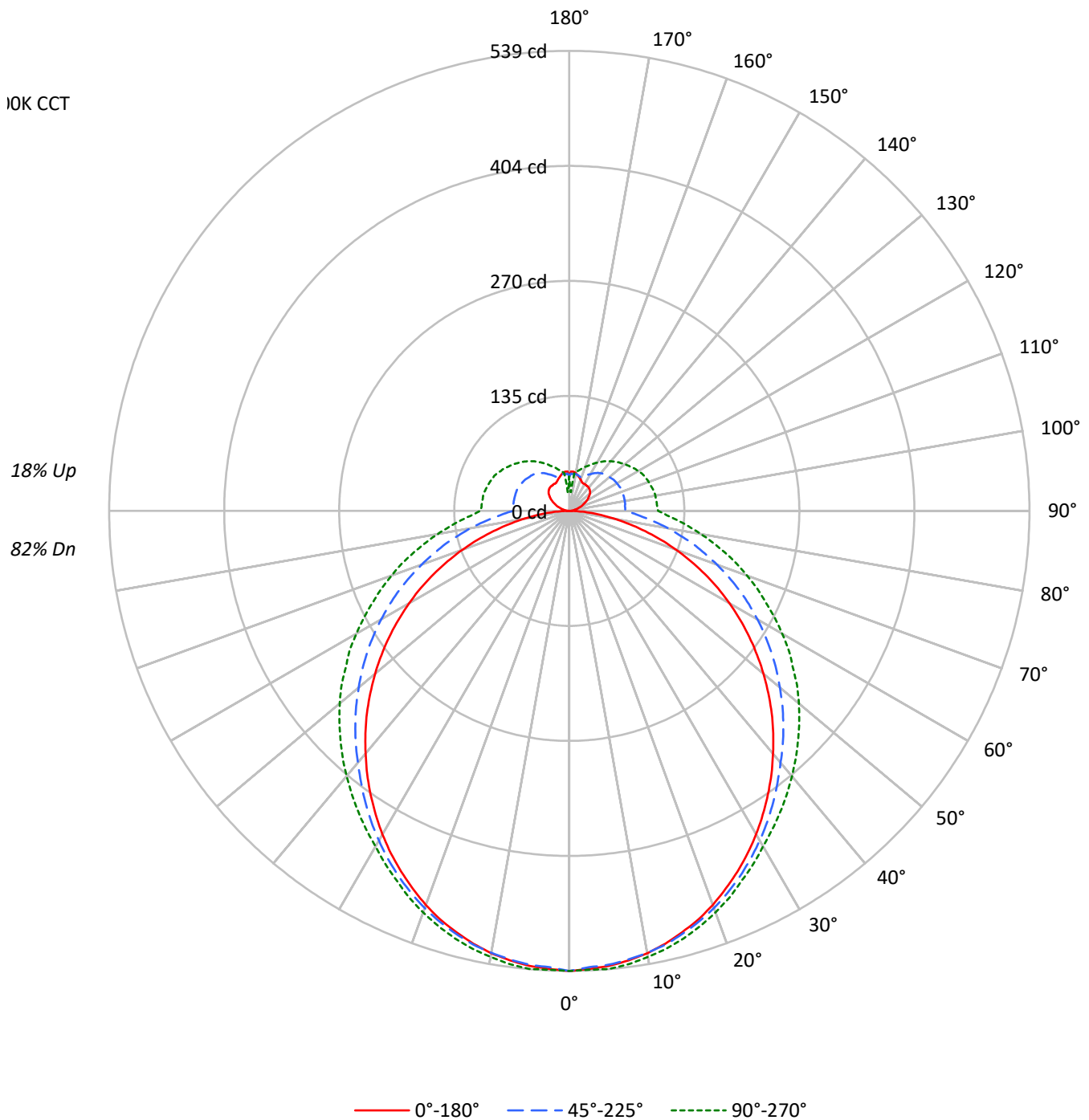
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2038.0 lumens
Efficiency: N/A
Efficacy: 147.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 13.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.92
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893291
CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

Luminous Intensity Polar Plot





TEST NUMBER: P893291

CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 110 | 101 | 101 | 101 | 93 | 93 | 93 | 86 | 86 | 86 | 86 | 86 | 86 | 82 |
| 1 | 103 | 98 | 93 | 89 | 99 | 94 | 90 | 86 | 86 | 83 | 80 | 79 | 77 | 74 | 73 | 71 | 69 | 69 | 69 | 69 | 66 |
| 2 | 93 | 85 | 77 | 71 | 89 | 81 | 75 | 69 | 75 | 69 | 65 | 69 | 64 | 61 | 63 | 60 | 57 | 57 | 57 | 57 | 54 |
| 3 | 85 | 74 | 65 | 59 | 81 | 71 | 63 | 57 | 65 | 59 | 54 | 60 | 55 | 51 | 55 | 51 | 48 | 48 | 48 | 48 | 45 |
| 4 | 77 | 65 | 56 | 49 | 74 | 63 | 54 | 48 | 58 | 51 | 45 | 53 | 48 | 43 | 49 | 45 | 41 | 41 | 41 | 41 | 38 |
| 5 | 71 | 58 | 49 | 42 | 68 | 56 | 47 | 41 | 52 | 45 | 39 | 48 | 42 | 37 | 44 | 39 | 35 | 35 | 35 | 35 | 32 |
| 6 | 66 | 52 | 43 | 37 | 62 | 50 | 42 | 36 | 47 | 39 | 34 | 43 | 37 | 32 | 40 | 35 | 31 | 31 | 31 | 31 | 28 |
| 7 | 61 | 47 | 38 | 32 | 58 | 45 | 37 | 31 | 42 | 35 | 30 | 39 | 33 | 29 | 37 | 31 | 27 | 27 | 27 | 27 | 25 |
| 8 | 56 | 43 | 34 | 29 | 54 | 41 | 33 | 28 | 39 | 32 | 27 | 36 | 30 | 26 | 34 | 28 | 24 | 24 | 24 | 24 | 22 |
| 9 | 53 | 39 | 31 | 26 | 50 | 38 | 30 | 25 | 35 | 29 | 24 | 33 | 27 | 23 | 31 | 26 | 22 | 22 | 22 | 22 | 20 |
| 10 | 49 | 36 | 28 | 23 | 47 | 35 | 28 | 23 | 33 | 26 | 22 | 31 | 25 | 21 | 29 | 24 | 20 | 20 | 20 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3836 | 3836 | 3836 |
| 5° | 3804 | 3675 | 3671 |
| 10° | 3768 | 3534 | 3496 |
| 15° | 3712 | 3393 | 3330 |
| 20° | 3650 | 3248 | 3161 |
| 25° | 3573 | 3097 | 2989 |
| 30° | 3490 | 2943 | 2833 |
| 35° | 3399 | 2789 | 2704 |
| 40° | 3303 | 2637 | 2581 |
| 45° | 3206 | 2504 | 2464 |
| 50° | 3093 | 2367 | 2350 |
| 55° | 2972 | 2232 | 2223 |
| 60° | 2826 | 2087 | 2103 |
| 65° | 2653 | 1935 | 1966 |
| 70° | 2426 | 1768 | 1839 |
| 75° | 2118 | 1598 | 1703 |
| 80° | 1712 | 1415 | 1562 |
| 85° | 1180 | 1229 | 1433 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3206 cd/sqm



TEST NUMBER: P893291
 CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 51.0 | 2.5 |
| 10°-20° | 145.4 | 7.1 |
| 20°-30° | 218.5 | 10.7 |
| 30°-40° | 262.3 | 12.9 |
| 40°-50° | 275.8 | 13.5 |
| 50°-60° | 259.2 | 12.7 |
| 60°-70° | 215.5 | 10.6 |
| 70°-80° | 153.8 | 7.5 |
| 80°-90° | 91.5 | 4.5 |
| 90°-100° | 66.3 | 3.3 |
| 100°-110° | 65.4 | 3.2 |
| 110°-120° | 61.4 | 3.0 |
| 120°-130° | 54.4 | 2.7 |
| 130°-140° | 45.1 | 2.2 |
| 140°-150° | 33.8 | 1.7 |
| 150°-160° | 22.2 | 1.1 |
| 160°-170° | 12.6 | 0.6 |
| 170°-180° | 4.0 | 0.2 |
| <hr/> | | |
| 0°-30° | 414.8 | 20.4 |
| 0°-40° | 677.1 | 33.2 |
| 0°-60° | 1212.1 | 59.5 |
| 0°-90° | 1672.9 | 82.1 |
| 90°-120° | 193.1 | 9.5 |
| 90°-150° | 326.3 | 16.0 |
| 90°-180° | 365.0 | 17.9 |
| 0°-180° | 2038.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 539 | 539 | 539 | 539 | 539 | |
| 5° | 535 | 542 | 534 | 535 | 539 | 51 |
| 15° | 511 | 519 | 513 | 516 | 518 | 144 |
| 25° | 466 | 475 | 473 | 477 | 478 | 215 |
| 35° | 406 | 415 | 416 | 427 | 431 | 254 |
| 45° | 335 | 345 | 354 | 373 | 379 | 258 |
| 55° | 258 | 268 | 289 | 313 | 320 | 230 |
| 65° | 175 | 190 | 220 | 247 | 254 | 173 |
| 75° | 92 | 113 | 150 | 179 | 189 | 98 |
| 85° | 23 | 51 | 88 | 118 | 128 | 25 |
| 90° | 0 | 29 | 66 | 94 | 104 | 2 |
| 95° | 2 | 30 | 66 | 93 | 103 | 3 |
| 105° | 9 | 34 | 66 | 92 | 101 | 10 |
| 115° | 18 | 37 | 66 | 88 | 97 | 18 |
| 125° | 28 | 39 | 64 | 83 | 89 | 25 |
| 135° | 34 | 41 | 60 | 75 | 81 | 26 |
| 145° | 36 | 40 | 54 | 67 | 71 | 23 |
| 155° | 36 | 41 | 46 | 57 | 60 | 17 |
| 165° | 42 | 44 | 43 | 43 | 50 | 12 |
| 175° | 46 | 46 | 43 | 37 | 22 | 4 |
| 180° | 40 | 40 | 40 | 40 | 40 | |



TEST NUMBER: P893291
 CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 |
| 2.5° | 537.1 | 538.6 | 539.1 | 544.0 | 542.0 | 544.0 | 540.6 | 536.6 | 535.6 | 538.1 | 535.1 |
| 5° | 535.1 | 536.6 | 537.1 | 542.0 | 540.1 | 541.5 | 538.6 | 534.7 | 533.7 | 536.6 | 533.7 |
| 7.5° | 531.2 | 532.7 | 533.2 | 538.6 | 536.1 | 538.1 | 534.7 | 530.7 | 530.2 | 533.2 | 530.2 |
| 10° | 526.3 | 527.8 | 528.3 | 533.2 | 531.2 | 533.2 | 529.7 | 525.8 | 525.3 | 528.7 | 525.8 |
| 12.5° | 519.4 | 520.9 | 521.9 | 526.8 | 524.3 | 526.8 | 522.8 | 518.9 | 519.4 | 522.3 | 520.4 |
| 15° | 511.0 | 513.0 | 513.5 | 518.4 | 516.4 | 518.9 | 515.0 | 511.0 | 512.0 | 515.0 | 513.0 |
| 17.5° | 502.2 | 504.1 | 504.6 | 509.1 | 507.1 | 510.0 | 505.6 | 502.2 | 503.1 | 506.1 | 504.6 |
| 20° | 491.3 | 493.3 | 494.3 | 498.7 | 496.7 | 499.7 | 495.3 | 492.3 | 493.3 | 496.7 | 495.3 |
| 22.5° | 479.0 | 482.0 | 482.5 | 487.4 | 484.9 | 487.9 | 483.5 | 481.0 | 482.5 | 485.9 | 484.4 |
| 25° | 466.2 | 469.2 | 469.7 | 474.6 | 472.6 | 475.1 | 470.7 | 468.2 | 470.2 | 473.6 | 472.6 |
| 27.5° | 452.4 | 455.4 | 456.4 | 460.8 | 458.8 | 461.8 | 456.9 | 455.4 | 457.4 | 460.8 | 459.8 |
| 30° | 437.7 | 440.6 | 441.1 | 445.5 | 444.1 | 447.0 | 442.6 | 440.6 | 443.6 | 447.0 | 446.0 |
| 32.5° | 421.9 | 424.9 | 426.3 | 430.3 | 428.8 | 431.3 | 427.3 | 426.3 | 428.8 | 432.3 | 431.8 |
| 35° | 405.7 | 408.6 | 410.1 | 414.5 | 412.6 | 415.0 | 411.1 | 410.1 | 414.0 | 416.5 | 416.5 |
| 37.5° | 388.9 | 391.9 | 393.4 | 397.8 | 395.3 | 398.3 | 394.3 | 393.9 | 398.3 | 400.7 | 400.7 |
| 40° | 371.2 | 374.7 | 376.1 | 380.1 | 378.1 | 380.6 | 377.1 | 377.6 | 381.5 | 384.5 | 385.0 |
| 42.5° | 353.5 | 356.9 | 358.4 | 362.8 | 360.4 | 362.8 | 359.9 | 360.4 | 364.8 | 367.8 | 370.2 |
| 45° | 335.3 | 338.2 | 339.7 | 344.6 | 341.7 | 344.6 | 341.7 | 342.7 | 347.1 | 351.5 | 354.5 |
| 47.5° | 316.1 | 319.0 | 321.5 | 325.4 | 323.0 | 325.4 | 323.5 | 324.9 | 330.3 | 334.8 | 338.7 |
| 50° | 296.9 | 299.8 | 302.3 | 305.7 | 303.3 | 306.7 | 304.3 | 306.2 | 313.1 | 317.5 | 322.0 |
| 52.5° | 277.2 | 279.6 | 283.6 | 285.5 | 283.6 | 287.5 | 285.5 | 288.5 | 295.4 | 300.8 | 305.7 |
| 55° | 257.5 | 259.9 | 263.9 | 265.4 | 263.4 | 267.8 | 266.3 | 270.3 | 277.7 | 283.6 | 289.0 |
| 57.5° | 237.3 | 239.8 | 243.2 | 244.7 | 243.2 | 248.1 | 247.6 | 252.1 | 259.5 | 265.9 | 271.8 |
| 60° | 216.6 | 219.1 | 222.0 | 223.5 | 223.5 | 228.4 | 228.4 | 233.8 | 241.7 | 247.6 | 254.5 |
| 62.5° | 196.4 | 197.9 | 200.9 | 202.8 | 204.3 | 209.2 | 209.2 | 215.1 | 223.5 | 230.4 | 237.3 |
| 65° | 175.3 | 176.7 | 179.2 | 181.7 | 184.1 | 189.5 | 190.0 | 196.4 | 204.8 | 211.7 | 219.6 |
| 67.5° | 154.1 | 155.6 | 158.0 | 161.0 | 164.4 | 169.8 | 170.8 | 177.7 | 186.6 | 194.5 | 201.8 |
| 70° | 133.4 | 133.9 | 136.9 | 140.8 | 144.7 | 150.2 | 151.6 | 159.0 | 168.4 | 176.2 | 184.1 |
| 72.5° | 112.7 | 113.2 | 116.2 | 121.1 | 125.5 | 131.4 | 133.4 | 141.3 | 150.6 | 158.5 | 166.4 |
| 75° | 92.1 | 92.6 | 96.5 | 102.4 | 107.3 | 112.7 | 115.2 | 123.6 | 132.9 | 141.3 | 150.2 |
| 77.5° | 72.4 | 73.4 | 77.3 | 83.2 | 89.1 | 95.5 | 98.0 | 106.3 | 116.7 | 124.6 | 132.9 |
| 80° | 54.2 | 55.1 | 59.6 | 66.0 | 72.4 | 78.3 | 81.2 | 89.6 | 100.4 | 108.3 | 117.7 |
| 82.5° | 37.4 | 38.9 | 44.3 | 51.2 | 57.6 | 64.0 | 67.0 | 74.8 | 84.7 | 93.5 | 102.4 |
| 85° | 23.1 | 25.1 | 30.5 | 37.9 | 44.8 | 50.7 | 53.7 | 62.0 | 71.4 | 79.8 | 88.1 |
| 87.5° | 10.8 | 13.8 | 19.2 | 26.6 | 34.0 | 38.9 | 42.3 | 50.7 | 59.6 | 67.9 | 76.3 |
| 90° | 0.0 | 4.4 | 9.8 | 17.2 | 24.6 | 29.0 | 33.0 | 40.9 | 49.7 | 57.6 | 65.5 |
| 92.5° | 1.0 | 4.9 | 10.8 | 17.7 | 25.1 | 29.5 | 33.5 | 41.4 | 49.7 | 57.6 | 65.5 |
| 95° | 2.5 | 5.4 | 11.3 | 18.7 | 26.1 | 30.5 | 34.0 | 41.8 | 50.2 | 58.1 | 65.5 |
| 97.5° | 4.4 | 6.9 | 12.8 | 19.7 | 27.1 | 31.0 | 35.0 | 42.8 | 50.7 | 58.6 | 66.0 |
| 100° | 5.9 | 7.9 | 13.8 | 20.7 | 28.1 | 32.0 | 35.9 | 43.3 | 51.2 | 59.1 | 66.0 |
| 102.5° | 7.4 | 9.8 | 15.3 | 21.7 | 29.0 | 33.0 | 36.4 | 43.8 | 51.7 | 59.1 | 66.0 |
| 105° | 9.4 | 11.3 | 16.2 | 23.1 | 30.0 | 34.0 | 37.4 | 44.8 | 52.2 | 59.6 | 66.0 |
| 107.5° | 11.3 | 12.8 | 17.7 | 24.1 | 31.0 | 34.5 | 37.9 | 45.3 | 52.7 | 59.6 | 66.0 |
| 110° | 13.8 | 14.8 | 19.2 | 25.1 | 31.5 | 35.4 | 38.9 | 45.8 | 52.7 | 59.6 | 66.0 |



TEST NUMBER: P893291
 CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|--------|------|------|------|------|------|-------|------|------|------|------|------|
| 112.5° | 16.2 | 16.2 | 20.7 | 26.1 | 32.5 | 35.9 | 39.4 | 46.3 | 53.2 | 59.6 | 66.0 |
| 115° | 18.2 | 18.7 | 22.2 | 27.1 | 33.5 | 36.9 | 39.9 | 46.3 | 53.2 | 59.6 | 65.5 |
| 117.5° | 20.7 | 20.7 | 24.1 | 28.1 | 34.0 | 37.4 | 40.9 | 46.8 | 53.2 | 59.1 | 65.0 |
| 120° | 23.1 | 22.6 | 25.6 | 29.5 | 35.0 | 37.9 | 41.4 | 47.3 | 53.2 | 59.1 | 64.5 |
| 122.5° | 25.6 | 24.6 | 26.6 | 30.5 | 35.4 | 38.9 | 41.4 | 47.3 | 53.2 | 58.6 | 64.0 |
| 125° | 27.6 | 26.6 | 28.1 | 32.0 | 36.4 | 39.4 | 41.8 | 47.3 | 53.2 | 58.1 | 63.5 |
| 127.5° | 29.5 | 28.6 | 30.0 | 33.0 | 36.9 | 39.4 | 42.3 | 47.3 | 53.2 | 57.6 | 62.5 |
| 130° | 31.5 | 30.0 | 32.0 | 34.0 | 37.9 | 39.9 | 42.3 | 47.3 | 52.7 | 57.1 | 61.5 |
| 132.5° | 33.0 | 31.5 | 33.5 | 35.0 | 38.4 | 40.4 | 42.8 | 47.3 | 52.2 | 56.6 | 61.0 |
| 135° | 34.0 | 32.5 | 35.0 | 35.9 | 39.4 | 41.4 | 43.3 | 47.3 | 51.7 | 56.1 | 60.1 |
| 137.5° | 35.0 | 33.0 | 35.9 | 36.9 | 39.9 | 41.8 | 43.3 | 46.8 | 51.2 | 55.1 | 59.1 |
| 140° | 35.4 | 34.0 | 36.9 | 37.9 | 39.4 | 41.4 | 43.3 | 46.3 | 50.2 | 54.2 | 57.6 |
| 142.5° | 35.9 | 34.0 | 37.4 | 38.4 | 39.4 | 40.9 | 42.8 | 45.3 | 49.2 | 52.7 | 56.1 |
| 145° | 35.9 | 34.5 | 37.4 | 38.4 | 39.4 | 40.4 | 41.8 | 44.8 | 47.8 | 50.7 | 54.2 |
| 147.5° | 35.9 | 35.0 | 37.9 | 38.9 | 39.9 | 39.9 | 40.9 | 43.8 | 46.3 | 49.2 | 52.2 |
| 150° | 36.4 | 35.0 | 37.9 | 38.9 | 40.4 | 40.4 | 40.9 | 42.3 | 45.3 | 47.3 | 49.7 |
| 152.5° | 35.9 | 35.4 | 37.4 | 39.4 | 40.4 | 40.9 | 40.9 | 41.4 | 43.8 | 45.8 | 47.8 |
| 155° | 36.4 | 36.4 | 37.9 | 40.4 | 40.9 | 40.9 | 41.4 | 40.9 | 41.8 | 43.8 | 45.8 |
| 157.5° | 37.4 | 38.4 | 38.4 | 40.9 | 41.8 | 41.8 | 42.3 | 41.8 | 41.4 | 41.8 | 43.8 |
| 160° | 38.9 | 39.9 | 39.9 | 41.4 | 42.8 | 42.8 | 43.3 | 42.8 | 42.3 | 41.8 | 41.8 |
| 162.5° | 40.4 | 41.4 | 41.4 | 41.8 | 43.3 | 43.8 | 44.3 | 43.8 | 43.3 | 42.3 | 41.8 |
| 165° | 41.8 | 42.8 | 42.8 | 42.8 | 43.8 | 44.3 | 44.8 | 44.3 | 44.3 | 43.3 | 42.8 |
| 167.5° | 43.3 | 44.3 | 44.3 | 43.8 | 44.3 | 44.8 | 45.3 | 44.8 | 44.8 | 44.3 | 43.3 |
| 170° | 44.8 | 45.8 | 45.8 | 44.8 | 45.3 | 45.3 | 45.8 | 45.3 | 45.3 | 44.3 | 43.8 |
| 172.5° | 45.8 | 46.8 | 46.3 | 45.8 | 45.8 | 45.8 | 45.8 | 45.3 | 44.8 | 43.8 | 43.8 |
| 175° | 46.3 | 47.3 | 47.3 | 46.3 | 45.8 | 45.8 | 46.3 | 45.3 | 44.8 | 44.3 | 43.3 |
| 177.5° | 46.3 | 47.3 | 47.3 | 46.3 | 46.3 | 45.8 | 46.3 | 45.8 | 45.8 | 44.8 | 43.8 |
| 180° | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 |



TEST NUMBER: P893291
 CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 |
| 2.5° | 537.1 | 536.6 | 533.7 | 537.1 | 537.1 | 536.1 | 540.1 | 539.6 | 539.1 | 538.1 |
| 5° | 535.1 | 534.7 | 531.7 | 535.1 | 535.1 | 534.7 | 538.6 | 539.1 | 539.6 | 538.6 |
| 7.5° | 532.2 | 531.7 | 528.7 | 532.2 | 532.2 | 531.7 | 536.1 | 536.6 | 537.1 | 535.6 |
| 10° | 527.8 | 527.3 | 524.3 | 527.8 | 528.3 | 527.8 | 531.2 | 531.7 | 532.7 | 530.7 |
| 12.5° | 521.9 | 521.9 | 518.9 | 522.3 | 522.8 | 522.3 | 525.8 | 526.8 | 527.8 | 525.3 |
| 15° | 514.5 | 515.0 | 512.5 | 515.9 | 516.4 | 516.4 | 519.9 | 520.4 | 521.9 | 518.4 |
| 17.5° | 505.6 | 506.6 | 504.6 | 508.1 | 508.6 | 509.1 | 511.0 | 512.5 | 514.0 | 510.0 |
| 20° | 496.3 | 496.7 | 495.3 | 498.2 | 499.2 | 498.7 | 501.2 | 503.1 | 504.6 | 500.7 |
| 22.5° | 484.9 | 485.4 | 483.9 | 486.9 | 487.9 | 488.4 | 490.3 | 492.8 | 493.8 | 490.3 |
| 25° | 472.1 | 474.1 | 473.1 | 476.1 | 477.1 | 477.1 | 479.0 | 481.5 | 483.0 | 478.0 |
| 27.5° | 459.8 | 462.3 | 461.3 | 464.3 | 465.2 | 465.7 | 466.7 | 469.7 | 471.1 | 466.7 |
| 30° | 446.0 | 449.0 | 448.5 | 451.5 | 452.4 | 451.9 | 453.9 | 456.9 | 458.8 | 453.9 |
| 32.5° | 430.8 | 434.7 | 434.2 | 438.2 | 439.1 | 439.6 | 441.1 | 445.1 | 447.0 | 442.6 |
| 35° | 416.0 | 420.4 | 420.9 | 425.4 | 426.8 | 427.3 | 429.3 | 433.2 | 435.2 | 430.8 |
| 37.5° | 400.7 | 406.7 | 408.1 | 412.6 | 414.0 | 414.5 | 416.5 | 420.9 | 422.9 | 418.5 |
| 40° | 386.0 | 392.9 | 394.8 | 398.8 | 400.3 | 401.7 | 403.2 | 407.6 | 410.1 | 405.7 |
| 42.5° | 371.2 | 378.6 | 381.1 | 385.0 | 386.5 | 387.9 | 389.9 | 394.8 | 396.8 | 392.9 |
| 45° | 355.9 | 363.8 | 366.8 | 370.7 | 372.7 | 374.2 | 376.1 | 380.6 | 383.0 | 379.1 |
| 47.5° | 340.7 | 348.6 | 351.5 | 355.9 | 357.9 | 359.9 | 361.4 | 366.8 | 369.2 | 365.3 |
| 50° | 324.4 | 333.3 | 336.7 | 340.7 | 343.6 | 345.1 | 347.1 | 352.0 | 354.5 | 351.0 |
| 52.5° | 308.2 | 317.5 | 321.5 | 325.4 | 328.4 | 330.8 | 331.8 | 337.2 | 339.7 | 336.3 |
| 55° | 291.5 | 300.8 | 305.2 | 309.7 | 312.6 | 315.6 | 316.6 | 322.0 | 324.4 | 319.5 |
| 57.5° | 274.7 | 284.6 | 289.0 | 293.9 | 296.4 | 299.8 | 301.3 | 306.2 | 308.7 | 305.2 |
| 60° | 258.0 | 267.3 | 272.7 | 277.2 | 280.6 | 283.6 | 284.6 | 290.0 | 292.4 | 288.0 |
| 62.5° | 240.7 | 250.6 | 256.0 | 260.9 | 263.9 | 267.3 | 268.8 | 273.7 | 275.7 | 271.3 |
| 65° | 223.0 | 232.9 | 238.8 | 243.2 | 247.1 | 250.1 | 251.1 | 256.5 | 258.5 | 254.0 |
| 67.5° | 205.3 | 215.1 | 221.5 | 226.5 | 229.9 | 233.4 | 234.3 | 239.8 | 241.7 | 238.3 |
| 70° | 188.1 | 197.9 | 204.3 | 210.2 | 212.7 | 216.1 | 217.6 | 222.5 | 224.5 | 221.5 |
| 72.5° | 170.8 | 180.7 | 187.6 | 193.5 | 195.9 | 199.4 | 201.4 | 205.3 | 208.2 | 205.8 |
| 75° | 154.1 | 163.9 | 170.8 | 176.7 | 179.2 | 182.6 | 184.6 | 188.6 | 190.5 | 188.6 |
| 77.5° | 137.8 | 147.7 | 154.1 | 160.0 | 163.0 | 165.9 | 167.9 | 171.8 | 174.3 | 172.3 |
| 80° | 122.1 | 131.9 | 138.3 | 143.8 | 146.7 | 149.7 | 151.6 | 156.1 | 158.0 | 156.6 |
| 82.5° | 107.3 | 116.7 | 123.6 | 129.0 | 131.9 | 134.9 | 136.9 | 140.8 | 143.3 | 141.3 |
| 85° | 94.0 | 103.4 | 109.8 | 115.2 | 117.7 | 120.6 | 122.6 | 126.5 | 128.5 | 127.5 |
| 87.5° | 81.2 | 89.6 | 97.0 | 102.4 | 104.9 | 107.8 | 110.3 | 113.2 | 115.7 | 114.2 |
| 90° | 71.4 | 78.8 | 85.7 | 91.1 | 94.0 | 97.0 | 99.9 | 102.9 | 104.9 | 103.9 |
| 92.5° | 71.9 | 78.8 | 85.2 | 90.1 | 93.0 | 96.0 | 99.0 | 102.4 | 103.9 | 102.9 |
| 95° | 71.9 | 78.8 | 85.2 | 90.1 | 93.0 | 96.0 | 99.0 | 102.4 | 103.9 | 102.9 |
| 97.5° | 71.9 | 78.8 | 85.2 | 90.1 | 93.0 | 96.0 | 99.0 | 102.4 | 103.9 | 102.4 |
| 100° | 71.9 | 78.8 | 85.2 | 90.1 | 93.0 | 95.5 | 98.5 | 101.9 | 103.4 | 102.4 |
| 102.5° | 71.9 | 78.8 | 84.7 | 89.6 | 92.6 | 95.0 | 98.0 | 101.4 | 102.9 | 101.9 |
| 105° | 71.9 | 78.3 | 84.7 | 89.1 | 92.1 | 94.5 | 97.5 | 100.4 | 101.9 | 100.9 |
| 107.5° | 71.4 | 77.8 | 83.7 | 88.6 | 91.1 | 93.5 | 96.5 | 99.4 | 100.9 | 99.9 |
| 110° | 71.4 | 77.3 | 83.2 | 87.6 | 90.1 | 92.6 | 95.5 | 98.5 | 99.9 | 99.0 |



TEST NUMBER: P893291

CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|--------|------|------|------|------|-------|------|------|------|------|------|
| 112.5° | 70.9 | 76.8 | 82.7 | 86.6 | 89.1 | 91.6 | 94.0 | 97.5 | 99.0 | 98.0 |
| 115° | 70.4 | 76.3 | 81.7 | 85.7 | 88.1 | 90.1 | 93.0 | 96.5 | 97.5 | 97.0 |
| 117.5° | 69.9 | 75.3 | 80.7 | 84.7 | 87.1 | 89.1 | 91.6 | 94.5 | 96.0 | 95.5 |
| 120° | 69.4 | 74.3 | 79.8 | 83.2 | 85.7 | 87.6 | 89.6 | 92.6 | 94.0 | 93.0 |
| 122.5° | 68.4 | 73.4 | 78.8 | 82.2 | 84.2 | 86.2 | 88.1 | 90.6 | 92.1 | 91.6 |
| 125° | 67.4 | 72.4 | 77.3 | 80.7 | 82.7 | 84.2 | 86.2 | 88.6 | 89.6 | 89.1 |
| 127.5° | 66.5 | 71.4 | 75.8 | 78.8 | 81.2 | 82.7 | 84.2 | 86.6 | 87.6 | 87.1 |
| 130° | 65.5 | 69.9 | 74.3 | 77.3 | 79.3 | 80.7 | 82.2 | 84.7 | 85.2 | 85.2 |
| 132.5° | 64.5 | 68.4 | 72.9 | 75.8 | 77.8 | 78.8 | 80.2 | 82.2 | 83.2 | 82.7 |
| 135° | 63.5 | 67.0 | 71.4 | 73.8 | 75.3 | 76.8 | 78.3 | 80.2 | 80.7 | 80.7 |
| 137.5° | 62.0 | 65.5 | 69.4 | 71.9 | 73.4 | 74.3 | 75.8 | 77.8 | 78.3 | 78.3 |
| 140° | 60.6 | 64.0 | 67.4 | 69.4 | 71.4 | 72.4 | 73.4 | 75.3 | 75.8 | 75.8 |
| 142.5° | 59.1 | 62.0 | 65.5 | 67.4 | 69.4 | 69.9 | 71.4 | 72.9 | 73.4 | 73.4 |
| 145° | 57.1 | 60.6 | 63.5 | 65.5 | 67.0 | 67.4 | 68.9 | 70.4 | 70.4 | 70.9 |
| 147.5° | 54.6 | 57.6 | 61.5 | 63.0 | 64.5 | 65.0 | 66.5 | 67.4 | 67.9 | 67.9 |
| 150° | 52.2 | 55.1 | 58.6 | 61.0 | 62.5 | 63.0 | 63.5 | 65.0 | 65.0 | 65.5 |
| 152.5° | 49.7 | 52.2 | 55.6 | 58.1 | 60.1 | 60.6 | 61.0 | 62.0 | 62.0 | 62.5 |
| 155° | 47.3 | 49.2 | 52.2 | 54.6 | 56.6 | 57.6 | 58.6 | 59.6 | 59.6 | 60.1 |
| 157.5° | 45.3 | 47.3 | 49.7 | 51.7 | 53.2 | 54.6 | 56.1 | 57.1 | 57.1 | 57.1 |
| 160° | 42.8 | 44.3 | 46.8 | 48.2 | 50.2 | 51.2 | 53.7 | 54.6 | 54.6 | 55.1 |
| 162.5° | 41.4 | 41.8 | 43.3 | 44.8 | 46.3 | 47.3 | 49.7 | 52.2 | 52.2 | 52.7 |
| 165° | 41.8 | 41.4 | 41.8 | 42.3 | 43.3 | 43.8 | 45.3 | 48.7 | 49.7 | 50.2 |
| 167.5° | 42.8 | 41.4 | 41.4 | 41.4 | 42.3 | 42.3 | 43.8 | 45.8 | 49.2 | 48.2 |
| 170° | 42.8 | 41.4 | 40.4 | 40.4 | 40.9 | 40.4 | 41.4 | 42.8 | 44.8 | 46.8 |
| 172.5° | 43.3 | 41.8 | 40.4 | 38.4 | 38.9 | 38.4 | 37.4 | 37.4 | 37.9 | 44.3 |
| 175° | 42.8 | 41.8 | 39.9 | 37.4 | 36.9 | 35.4 | 32.5 | 30.0 | 28.6 | 22.2 |
| 177.5° | 42.3 | 40.9 | 39.4 | 37.4 | 36.4 | 35.0 | 31.5 | 27.6 | 23.6 | 22.6 |
| 180° | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 |



TEST NUMBER: P893291
 CATALOG NUMBER: 4MB-2SL-FLTU-UNV-L840

CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 12.35 | 13.67 | 12.97 | 14.31 | 15.03 | 14.90 | 16.22 | 15.52 | 16.86 | 17.58 |
| | 3H | 13.76 | 14.96 | 14.39 | 15.60 | 16.36 | 17.33 | 18.53 | 17.96 | 19.18 | 19.93 |
| | 4H | 14.19 | 15.33 | 14.84 | 15.98 | 16.75 | 18.47 | 19.61 | 19.12 | 20.27 | 21.04 |
| | 6H | 14.43 | 15.48 | 15.09 | 16.15 | 16.93 | 19.61 | 20.67 | 20.27 | 21.33 | 22.12 |
| | 8H | 14.47 | 15.48 | 15.14 | 16.17 | 16.95 | 20.17 | 21.18 | 20.84 | 21.87 | 22.66 |
| | 12H | 14.48 | 15.45 | 15.16 | 16.13 | 16.95 | 20.75 | 21.72 | 21.43 | 22.40 | 23.22 |
| 4H | 2H | 13.24 | 14.38 | 13.89 | 15.04 | 15.80 | 15.25 | 16.39 | 15.90 | 17.05 | 17.82 |
| | 3H | 14.87 | 15.83 | 15.53 | 16.53 | 17.32 | 17.89 | 18.85 | 18.55 | 19.54 | 20.33 |
| | 4H | 15.42 | 16.31 | 16.10 | 17.00 | 17.82 | 19.18 | 20.06 | 19.86 | 20.76 | 21.58 |
| | 6H | 15.76 | 16.54 | 16.46 | 17.26 | 18.09 | 20.49 | 21.26 | 21.18 | 21.99 | 22.81 |
| | 8H | 15.84 | 16.57 | 16.54 | 17.29 | 18.13 | 21.14 | 21.88 | 21.85 | 22.59 | 23.44 |
| | 12H | 15.87 | 16.53 | 16.59 | 17.27 | 18.12 | 21.85 | 22.51 | 22.57 | 23.25 | 24.10 |
| 8H | 4H | 16.07 | 16.80 | 16.77 | 17.52 | 18.36 | 19.33 | 20.06 | 20.03 | 20.78 | 21.62 |
| | 6H | 16.58 | 17.19 | 17.31 | 17.95 | 18.80 | 20.78 | 21.40 | 21.52 | 22.16 | 23.00 |
| | 8H | 16.73 | 17.29 | 17.48 | 18.05 | 18.91 | 21.56 | 22.12 | 22.31 | 22.88 | 23.74 |
| | 12H | 16.82 | 17.32 | 17.57 | 18.07 | 18.99 | 22.42 | 22.92 | 23.17 | 23.67 | 24.59 |
| 12H | 4H | 16.24 | 16.90 | 16.96 | 17.64 | 18.49 | 19.32 | 19.98 | 20.04 | 20.72 | 21.57 |
| | 6H | 16.83 | 17.39 | 17.58 | 18.15 | 19.01 | 20.80 | 21.36 | 21.55 | 22.12 | 22.98 |
| | 8H | 17.07 | 17.56 | 17.82 | 18.31 | 19.23 | 21.63 | 22.13 | 22.38 | 22.88 | 23.80 |