**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MHB-01-LED-18L-DPW-50-80CRI.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] 3915
[TESTLAB] TUV SUD America
[TESTDATE] 7/20/2020 10:57:09 AM
[ISSUEDATE] 04/05/2022
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MHB-01-LED-18L-DPW-50-80CRI
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED
[OTHER] SCALED FROM ORIGINAL TEST DATA
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor
[_SEARCH_COLORTEMP] 5000

**CHARACTERISTICS**

| | |
|---|---|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 17207 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 141 |
| Total Luminaire Watts | 122 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.22 |
| Spacing Criterion (90-270) | 1.20 |
| Spacing Criterion (Diagonal) | 1.32 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 1.14 ft |
| Luminous Width (90-270) | 1.16 ft |
| Luminous Height | 0.00 ft |

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

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---|---|---|---|
| 45 | 47807 | 46042 | 43667 |
| 55 | 46050 | 43008 | 38762 |
| 65 | 44161 | 40235 | 33116 |
| 75 | 43202 | 37594 | 26078 |
| 85 | 44693 | 33776 | 14276 |

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MHB-01-LED-18L-DPW-50-80CRI.IES**

**CANDELA TABULATION**

| | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|
| **0.0** | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 |
| **2.5** | 6546 | 6548 | 6548 | 6548 | 6549 | 6549 | 6549 | 6549 | 6548 | 6546 |
| **5.0** | 6543 | 6539 | 6533 | 6525 | 6530 | 6534 | 6536 | 6534 | 6522 | 6519 |
| **7.5** | 6515 | 6513 | 6495 | 6495 | 6498 | 6497 | 6495 | 6492 | 6480 | 6474 |
| **10.0** | 6467 | 6455 | 6448 | 6446 | 6446 | 6443 | 6437 | 6432 | 6418 | 6411 |
| **12.5** | 6403 | 6378 | 6376 | 6376 | 6373 | 6369 | 6361 | 6351 | 6338 | 6327 |
| **15.0** | 6313 | 6287 | 6290 | 6287 | 6284 | 6275 | 6266 | 6254 | 6239 | 6226 |
| **17.5** | 6195 | 6177 | 6180 | 6179 | 6175 | 6166 | 6155 | 6141 | 6123 | 6109 |
| **20.0** | 6062 | 6050 | 6053 | 6053 | 6049 | 6037 | 6027 | 6010 | 5988 | 5972 |
| **22.5** | 5909 | 5906 | 5909 | 5908 | 5903 | 5893 | 5878 | 5860 | 5836 | 5818 |
| **25.0** | 5744 | 5746 | 5749 | 5746 | 5741 | 5728 | 5713 | 5695 | 5665 | 5646 |
| **27.5** | 5566 | 5572 | 5572 | 5567 | 5561 | 5548 | 5532 | 5509 | 5479 | 5460 |
| **30.0** | 5382 | 5390 | 5387 | 5379 | 5369 | 5353 | 5334 | 5311 | 5278 | 5255 |
| **32.5** | 5188 | 5198 | 5194 | 5179 | 5164 | 5146 | 5124 | 5099 | 5063 | 5037 |
| **35.0** | 4988 | 5000 | 4991 | 4974 | 4952 | 4927 | 4904 | 4874 | 4836 | 4810 |
| **37.5** | 4785 | 4801 | 4783 | 4759 | 4728 | 4698 | 4669 | 4637 | 4597 | 4569 |
| **40.0** | 4582 | 4597 | 4573 | 4541 | 4500 | 4462 | 4428 | 4389 | 4349 | 4316 |
| **42.5** | 4374 | 4389 | 4358 | 4318 | 4271 | 4221 | 4176 | 4136 | 4093 | 4063 |
| **45.0** | 4157 | 4174 | 4140 | 4093 | 4033 | 3974 | 3920 | 3876 | 3832 | 3797 |
| **47.5** | 3936 | 3954 | 3919 | 3865 | 3795 | 3727 | 3663 | 3609 | 3563 | 3532 |
| **50.0** | 3709 | 3733 | 3694 | 3634 | 3554 | 3478 | 3405 | 3349 | 3298 | 3263 |
| **52.5** | 3483 | 3506 | 3466 | 3401 | 3319 | 3233 | 3152 | 3089 | 3032 | 2999 |
| **55.0** | 3248 | 3274 | 3234 | 3167 | 3081 | 2986 | 2898 | 2822 | 2764 | 2734 |
| **57.5** | 3010 | 3039 | 3002 | 2934 | 2846 | 2743 | 2648 | 2566 | 2504 | 2470 |
| **60.0** | 2772 | 2804 | 2769 | 2699 | 2611 | 2504 | 2401 | 2312 | 2251 | 2211 |
| **62.5** | 2532 | 2565 | 2533 | 2468 | 2376 | 2270 | 2162 | 2068 | 2003 | 1964 |
| **65.0** | 2295 | 2330 | 2295 | 2235 | 2145 | 2037 | 1928 | 1830 | 1758 | 1721 |
| **67.5** | 2062 | 2099 | 2063 | 2001 | 1915 | 1811 | 1702 | 1599 | 1523 | 1486 |
| **70.0** | 1831 | 1871 | 1837 | 1772 | 1686 | 1587 | 1477 | 1372 | 1296 | 1259 |
| **72.5** | 1605 | 1645 | 1605 | 1546 | 1458 | 1364 | 1262 | 1159 | 1073 | 1034 |
| **75.0** | 1375 | 1421 | 1385 | 1322 | 1241 | 1152 | 1055 | 955 | 867 | 830 |
| **77.5** | 1117 | 1171 | 1149 | 1099 | 1025 | 942 | 854 | 759 | 670 | 631 |
| **80.0** | 869 | 915 | 896 | 858 | 808 | 738 | 660 | 574 | 492 | 447 |
| **82.5** | 670 | 702 | 671 | 632 | 585 | 535 | 472 | 402 | 329 | 286 |
| **85.0** | 479 | 522 | 487 | 437 | 388 | 336 | 290 | 238 | 186 | 153 |
| **87.5** | 246 | 309 | 272 | 235 | 201 | 155 | 124 | 101 | 71 | 58 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **92.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **95.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **97.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **100.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **102.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **105.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **107.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **110.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **112.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **115.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **117.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **120.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **122.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **125.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **127.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **130.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **132.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Results derived from content of manufacturers photometric file.

**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **135.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **137.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **140.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **142.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **145.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **147.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **150.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **152.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **155.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **157.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **160.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **162.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **165.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **167.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **170.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **172.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **175.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **177.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **180.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| **Vert. Angles** | **Horizontal Angles** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **100** | **110** | **120** | **130** | **140** | **150** | **160** | **170** | **180** | **190** |
| **0.0** | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 |
| **2.5** | 6546 | 6546 | 6545 | 6545 | 6543 | 6543 | 6545 | 6548 | 6548 | 6548 |
| **5.0** | 6516 | 6516 | 6516 | 6512 | 6506 | 6506 | 6506 | 6506 | 6506 | 6506 |
| **7.5** | 6470 | 6467 | 6463 | 6460 | 6455 | 6452 | 6457 | 6454 | 6452 | 6454 |
| **10.0** | 6405 | 6400 | 6393 | 6388 | 6385 | 6381 | 6381 | 6384 | 6382 | 6384 |
| **12.5** | 6320 | 6314 | 6307 | 6301 | 6298 | 6290 | 6285 | 6293 | 6292 | 6293 |
| **15.0** | 6217 | 6211 | 6204 | 6195 | 6189 | 6180 | 6172 | 6185 | 6183 | 6185 |
| **17.5** | 6097 | 6091 | 6082 | 6072 | 6065 | 6056 | 6046 | 6056 | 6059 | 6056 |
| **20.0** | 5960 | 5952 | 5942 | 5931 | 5923 | 5914 | 5902 | 5914 | 5921 | 5914 |
| **22.5** | 5802 | 5796 | 5784 | 5774 | 5765 | 5756 | 5746 | 5758 | 5771 | 5758 |
| **25.0** | 5628 | 5623 | 5609 | 5600 | 5592 | 5585 | 5576 | 5589 | 5604 | 5589 |
| **27.5** | 5441 | 5433 | 5423 | 5410 | 5405 | 5400 | 5394 | 5410 | 5430 | 5410 |
| **30.0** | 5240 | 5232 | 5218 | 5210 | 5207 | 5209 | 5207 | 5223 | 5246 | 5223 |
| **32.5** | 5021 | 5012 | 5003 | 4999 | 5000 | 5006 | 5011 | 5031 | 5058 | 5031 |
| **35.0** | 4792 | 4783 | 4777 | 4777 | 4786 | 4799 | 4810 | 4835 | 4867 | 4835 |
| **37.5** | 4553 | 4544 | 4541 | 4547 | 4564 | 4585 | 4604 | 4636 | 4672 | 4636 |
| **40.0** | 4299 | 4298 | 4298 | 4310 | 4337 | 4369 | 4392 | 4428 | 4469 | 4428 |
| **42.5** | 4045 | 4044 | 4047 | 4070 | 4105 | 4143 | 4176 | 4215 | 4258 | 4215 |
| **45.0** | 3783 | 3783 | 3795 | 3826 | 3871 | 3917 | 3954 | 3993 | 4039 | 3993 |
| **47.5** | 3518 | 3523 | 3537 | 3582 | 3634 | 3685 | 3725 | 3766 | 3814 | 3766 |
| **50.0** | 3252 | 3260 | 3285 | 3336 | 3396 | 3452 | 3495 | 3532 | 3584 | 3532 |
| **52.5** | 2991 | 2999 | 3033 | 3093 | 3160 | 3217 | 3263 | 3298 | 3353 | 3298 |
| **55.0** | 2724 | 2739 | 2781 | 2847 | 2922 | 2982 | 3025 | 3062 | 3121 | 3062 |
| **57.5** | 2465 | 2486 | 2536 | 2608 | 2684 | 2745 | 2791 | 2825 | 2885 | 2825 |
| **60.0** | 2214 | 2238 | 2297 | 2370 | 2450 | 2513 | 2559 | 2590 | 2648 | 2590 |
| **62.5** | 1965 | 1997 | 2059 | 2138 | 2218 | 2282 | 2323 | 2354 | 2411 | 2354 |
| **65.0** | 1723 | 1761 | 1827 | 1907 | 1988 | 2047 | 2087 | 2123 | 2178 | 2123 |
| **67.5** | 1485 | 1529 | 1604 | 1684 | 1760 | 1819 | 1865 | 1896 | 1949 | 1896 |
| **70.0** | 1262 | 1312 | 1381 | 1463 | 1532 | 1596 | 1641 | 1669 | 1724 | 1669 |
| **72.5** | 1043 | 1099 | 1174 | 1245 | 1313 | 1372 | 1419 | 1448 | 1504 | 1448 |
| **75.0** | 838 | 899 | 971 | 1037 | 1099 | 1157 | 1199 | 1216 | 1276 | 1216 |
| **77.5** | 647 | 708 | 774 | 832 | 893 | 927 | 952 | 968 | 1028 | 968 |
| **80.0** | 469 | 531 | 583 | 634 | 671 | 699 | 726 | 747 | 799 | 747 |

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**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **82.5** | 311 | 360 | 402 | 434 | 467 | 504 | 541 | 563 | 614 | 563 |
| **85.0** | 174 | 204 | 226 | 247 | 278 | 308 | 338 | 359 | 430 | 359 |
| **87.5** | 68 | 73 | 77 | 83 | 95 | 104 | 108 | 130 | 196 | 130 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **92.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **95.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **97.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **100.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **102.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **105.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **107.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **110.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **112.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **115.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **117.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **120.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **122.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **125.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **127.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **130.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **132.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **135.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **137.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **140.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **142.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **145.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **147.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **150.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **152.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **155.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **157.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **160.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **162.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **165.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **167.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **170.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **172.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **175.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **177.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **180.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| **Vert. Angles** | **Horizontal Angles** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **200** | **210** | **220** | **230** | **240** | **250** | **260** | **270** | **280** | **290** |
| **0.0** | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 |
| **2.5** | 6545 | 6543 | 6543 | 6545 | 6545 | 6546 | 6546 | 6546 | 6548 | 6549 |
| **5.0** | 6506 | 6506 | 6506 | 6512 | 6516 | 6516 | 6516 | 6519 | 6522 | 6534 |
| **7.5** | 6457 | 6452 | 6455 | 6460 | 6463 | 6467 | 6470 | 6474 | 6480 | 6492 |
| **10.0** | 6381 | 6381 | 6385 | 6388 | 6393 | 6400 | 6405 | 6411 | 6418 | 6432 |
| **12.5** | 6285 | 6290 | 6298 | 6301 | 6307 | 6314 | 6320 | 6327 | 6338 | 6351 |
| **15.0** | 6172 | 6180 | 6189 | 6195 | 6204 | 6211 | 6217 | 6226 | 6239 | 6254 |
| **17.5** | 6046 | 6056 | 6065 | 6072 | 6082 | 6091 | 6097 | 6109 | 6123 | 6141 |
| **20.0** | 5902 | 5914 | 5923 | 5931 | 5942 | 5952 | 5960 | 5972 | 5988 | 6010 |
| **22.5** | 5746 | 5756 | 5765 | 5774 | 5784 | 5796 | 5802 | 5818 | 5836 | 5860 |
| **25.0** | 5576 | 5585 | 5592 | 5600 | 5609 | 5623 | 5628 | 5646 | 5665 | 5695 |
| **27.5** | 5394 | 5400 | 5405 | 5410 | 5423 | 5433 | 5441 | 5460 | 5479 | 5509 |

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**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **30.0** | 5207 | 5209 | 5207 | 5210 | 5218 | 5232 | 5240 | 5255 | 5278 | 5311 |
| **32.5** | 5011 | 5006 | 5000 | 4999 | 5003 | 5012 | 5021 | 5037 | 5063 | 5099 |
| **35.0** | 4810 | 4799 | 4786 | 4777 | 4777 | 4783 | 4792 | 4810 | 4836 | 4874 |
| **37.5** | 4604 | 4585 | 4564 | 4547 | 4541 | 4544 | 4553 | 4569 | 4597 | 4637 |
| **40.0** | 4392 | 4369 | 4337 | 4310 | 4298 | 4298 | 4299 | 4316 | 4349 | 4389 |
| **42.5** | 4176 | 4143 | 4105 | 4070 | 4047 | 4044 | 4045 | 4063 | 4093 | 4136 |
| **45.0** | 3954 | 3917 | 3871 | 3826 | 3795 | 3783 | 3783 | 3797 | 3832 | 3876 |
| **47.5** | 3725 | 3685 | 3634 | 3582 | 3537 | 3523 | 3518 | 3532 | 3563 | 3609 |
| **50.0** | 3495 | 3452 | 3396 | 3336 | 3285 | 3260 | 3252 | 3263 | 3298 | 3349 |
| **52.5** | 3263 | 3217 | 3160 | 3093 | 3033 | 2999 | 2991 | 2999 | 3032 | 3089 |
| **55.0** | 3025 | 2982 | 2922 | 2847 | 2781 | 2739 | 2724 | 2734 | 2764 | 2822 |
| **57.5** | 2791 | 2745 | 2684 | 2608 | 2536 | 2486 | 2465 | 2470 | 2504 | 2566 |
| **60.0** | 2559 | 2513 | 2450 | 2370 | 2297 | 2238 | 2214 | 2211 | 2251 | 2312 |
| **62.5** | 2323 | 2282 | 2218 | 2138 | 2059 | 1997 | 1965 | 1964 | 2003 | 2068 |
| **65.0** | 2087 | 2047 | 1988 | 1907 | 1827 | 1761 | 1723 | 1721 | 1758 | 1830 |
| **67.5** | 1865 | 1819 | 1760 | 1684 | 1604 | 1529 | 1485 | 1486 | 1523 | 1599 |
| **70.0** | 1641 | 1596 | 1532 | 1463 | 1381 | 1312 | 1262 | 1259 | 1296 | 1372 |
| **72.5** | 1419 | 1372 | 1313 | 1245 | 1174 | 1099 | 1043 | 1034 | 1073 | 1159 |
| **75.0** | 1199 | 1157 | 1099 | 1037 | 971 | 899 | 838 | 830 | 867 | 955 |
| **77.5** | 952 | 927 | 893 | 832 | 774 | 708 | 647 | 631 | 670 | 759 |
| **80.0** | 726 | 699 | 671 | 634 | 583 | 531 | 469 | 447 | 492 | 574 |
| **82.5** | 541 | 504 | 467 | 434 | 402 | 360 | 311 | 286 | 329 | 402 |
| **85.0** | 338 | 308 | 278 | 247 | 226 | 204 | 174 | 153 | 186 | 238 |
| **87.5** | 108 | 104 | 95 | 83 | 77 | 73 | 68 | 58 | 71 | 101 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **92.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **95.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **97.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **100.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **102.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **105.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **107.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **110.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **112.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **115.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **117.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **120.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **122.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **125.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **127.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **130.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **132.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **135.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **137.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **140.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **142.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **145.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **147.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **150.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **152.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **155.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **157.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **160.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **162.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **165.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **167.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **170.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **172.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **175.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **177.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **180.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| **Vert. Angles** | **Horizontal Angles** | | | | | | |
|---|---|---|---|---|---|---|---|
| | **300** | **310** | **320** | **330** | **340** | **350** | **360** |
| **0.0** | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 | 6571 |
| **2.5** | 6549 | 6549 | 6549 | 6548 | 6548 | 6548 | 6546 |
| **5.0** | 6536 | 6534 | 6530 | 6525 | 6533 | 6539 | 6543 |
| **7.5** | 6495 | 6497 | 6498 | 6495 | 6495 | 6513 | 6515 |
| **10.0** | 6437 | 6443 | 6446 | 6446 | 6448 | 6455 | 6467 |
| **12.5** | 6361 | 6369 | 6373 | 6376 | 6376 | 6378 | 6403 |
| **15.0** | 6266 | 6275 | 6284 | 6287 | 6290 | 6287 | 6313 |
| **17.5** | 6155 | 6166 | 6175 | 6179 | 6180 | 6177 | 6195 |
| **20.0** | 6027 | 6037 | 6049 | 6053 | 6053 | 6050 | 6062 |
| **22.5** | 5878 | 5893 | 5903 | 5908 | 5909 | 5906 | 5909 |
| **25.0** | 5713 | 5728 | 5741 | 5746 | 5749 | 5746 | 5744 |
| **27.5** | 5532 | 5548 | 5561 | 5567 | 5572 | 5572 | 5566 |
| **30.0** | 5334 | 5353 | 5369 | 5379 | 5387 | 5390 | 5382 |
| **32.5** | 5124 | 5146 | 5164 | 5179 | 5194 | 5198 | 5188 |
| **35.0** | 4904 | 4927 | 4952 | 4974 | 4991 | 5000 | 4988 |
| **37.5** | 4669 | 4698 | 4728 | 4759 | 4783 | 4801 | 4785 |
| **40.0** | 4428 | 4462 | 4500 | 4541 | 4573 | 4597 | 4582 |
| **42.5** | 4176 | 4221 | 4271 | 4318 | 4358 | 4389 | 4374 |
| **45.0** | 3920 | 3974 | 4033 | 4093 | 4140 | 4174 | 4157 |
| **47.5** | 3663 | 3727 | 3795 | 3865 | 3919 | 3954 | 3936 |
| **50.0** | 3405 | 3478 | 3554 | 3634 | 3694 | 3733 | 3709 |
| **52.5** | 3152 | 3233 | 3319 | 3401 | 3466 | 3506 | 3483 |
| **55.0** | 2898 | 2986 | 3081 | 3167 | 3234 | 3274 | 3248 |
| **57.5** | 2648 | 2743 | 2846 | 2934 | 3002 | 3039 | 3010 |
| **60.0** | 2401 | 2504 | 2611 | 2699 | 2769 | 2804 | 2772 |
| **62.5** | 2162 | 2270 | 2376 | 2468 | 2533 | 2565 | 2532 |
| **65.0** | 1928 | 2037 | 2145 | 2235 | 2295 | 2330 | 2295 |
| **67.5** | 1702 | 1811 | 1915 | 2001 | 2063 | 2099 | 2062 |
| **70.0** | 1477 | 1587 | 1686 | 1772 | 1837 | 1871 | 1831 |
| **72.5** | 1262 | 1364 | 1458 | 1546 | 1605 | 1645 | 1605 |
| **75.0** | 1055 | 1152 | 1241 | 1322 | 1385 | 1421 | 1375 |
| **77.5** | 854 | 942 | 1025 | 1099 | 1149 | 1171 | 1117 |
| **80.0** | 660 | 738 | 808 | 858 | 896 | 915 | 869 |
| **82.5** | 472 | 535 | 585 | 632 | 671 | 702 | 670 |
| **85.0** | 290 | 336 | 388 | 437 | 487 | 522 | 479 |
| **87.5** | 124 | 155 | 201 | 235 | 272 | 309 | 246 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **92.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **95.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **97.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **100.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **102.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **105.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **107.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **110.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **112.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **115.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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**CANDELA TABULATION - (Cont.)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **117.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **120.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **122.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **125.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **127.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **130.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **132.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **135.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **137.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **140.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **142.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **145.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **147.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **150.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **152.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **155.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **157.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **160.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **162.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **165.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **167.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **170.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **172.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **175.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **177.5** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **180.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : MHB-01-LED-18L-DPW-50-80CRI.IES**

**ZONAL LUMEN SUMMARY**

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-20 | 2376.25 | N.A. | 13.80 |
| 0-30 | 4982.25 | N.A. | 29.00 |
| 0-40 | 8023.32 | N.A. | 46.60 |
| 0-60 | 13705.79 | N.A. | 79.70 |
| 0-80 | 16858.31 | N.A. | 98.00 |
| 0-90 | 17207.29 | N.A. | 100.00 |
| 10-90 | 16588.11 | N.A. | 96.40 |
| 20-40 | 5647.07 | N.A. | 32.80 |
| 20-50 | 8683.6 | N.A. | 50.50 |
| 40-70 | 7664.43 | N.A. | 44.50 |
| 60-80 | 3152.51 | N.A. | 18.30 |
| 70-80 | 1170.55 | N.A. | 6.80 |
| 80-90 | 348.98 | N.A. | 2.00 |
| 90-110 | 0.00 | N.A. | 0.00 |
| 90-120 | 0.00 | N.A. | 0.00 |
| 90-130 | 0.00 | N.A. | 0.00 |
| 90-150 | 0.00 | N.A. | 0.00 |
| 90-180 | 0.00 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 17207.29 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone | Lumens |
|---|---|
| 0-10 | 619.18 |
| 10-20 | 1757.07 |
| 20-30 | 2606.00 |
| 30-40 | 3041.07 |
| 40-50 | 3036.53 |
| 50-60 | 2645.94 |
| 60-70 | 1981.96 |
| 70-80 | 1170.55 |
| 80-90 | 348.98 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

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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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 98 | 94 | 91 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 83 | 77 | 85 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 72 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 62 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 62 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 66 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 59 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 40 | 33 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

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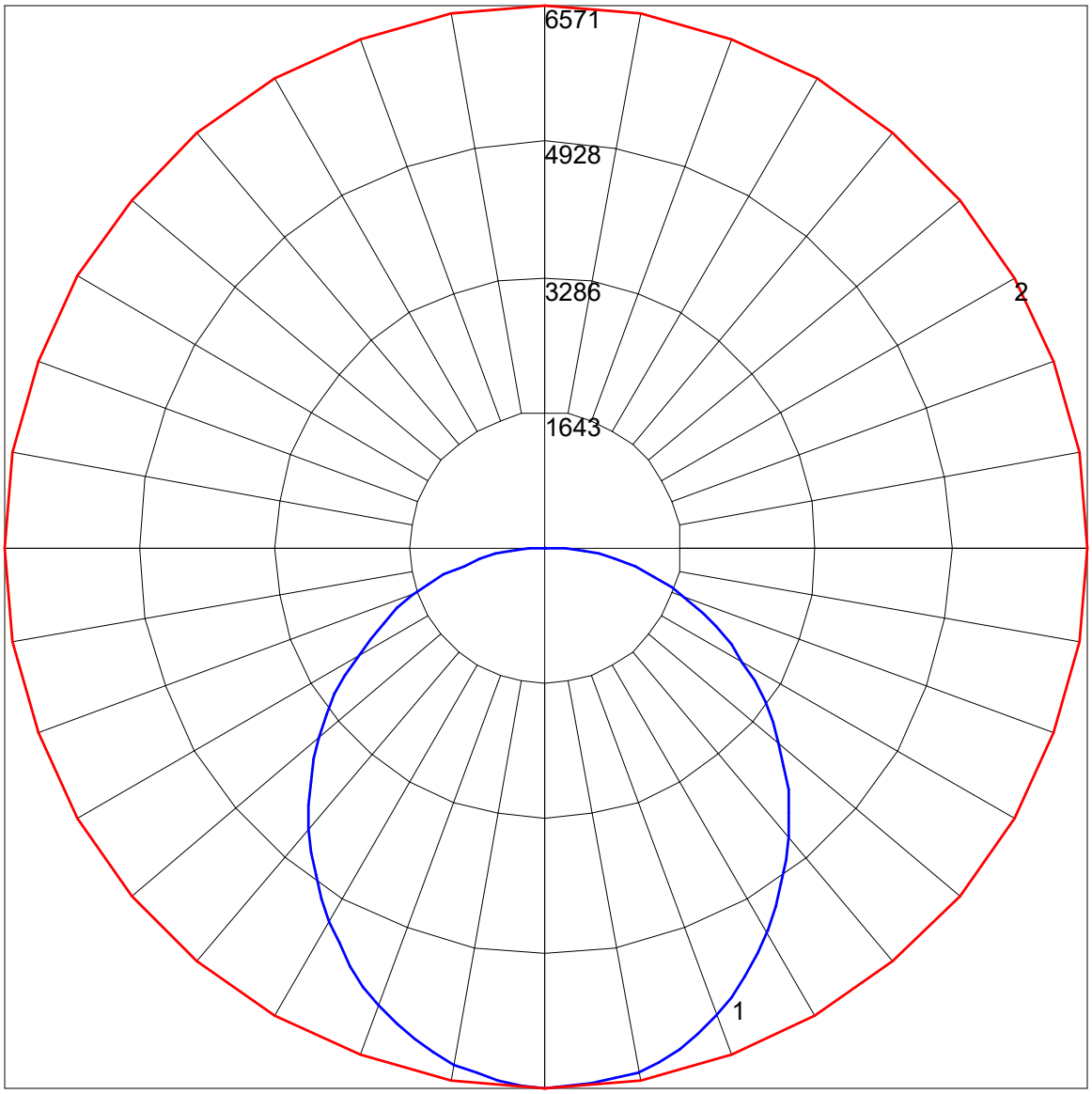
**PHOTOMETRIC FILENAME : MHB-01-LED-18L-DPW-50-80CRI.IES**

**POLAR GRAPH**




Maximum Candela = 6571  Located At Horizontal Angle = 0, Vertical Angle = 0
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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