

IESNA:LM-63-2002

[TEST]

[TESTLAB]Banner Engineering

[ISSUE DATE]06/16/2020

[MANUFAC]Banner Engineering

[LUMCAT]WLS15HxDW0920Lx

[LUMINAIRE]LED Work Light

[LAMP]63 White LEDs

TILT=NONE

1 -1 1 361 5 1 1 0.087 2.777 0.021

1 1 20.52

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10 10.5 11 11.5

12 12.5 13 13.5 14 14.5 15 15.5 16 16.5 17 17.5 18 18.5 19 19.5 20 20.5 21

21.5 22 22.5 23 23.5 24 24.5 25 25.5 26 26.5 27 27.5 28 28.5 29 29.5 30 30.5

31 31.5 32 32.5 33 33.5 34

34.5 35 35.5 36 36.5 37 37.5 38 38.5 39 39.5 40 40.5 41 41.5 42 42.5 43 43.5

44 44.5 45 45.5 46 46.5 47 47.5 48 48.5 49 49.5 50 50.5 51 51.5 52 52.5 53

53.5 54 54.5 55 55.5 56 56.5 57 57.5 58 58.5 59 59.5 60 60.5 61 61.5 62 62.5

63 63.5 64 64.5 65 65.5 66

66.5 67 67.5 68 68.5 69 69.5 70 70.5 71 71.5 72 72.5 73 73.5 74 74.5 75 75.5

76 76.5 77 77.5 78 78.5 79 79.5 80 80.5 81 81.5 82 82.5 83 83.5 84 84.5 85

85.5 86 86.5 87 87.5 88 88.5 89 89.5 90 90.5 91 91.5 92 92.5 93 93.5 94 94.5

95 95.5 96 96.5 97 97.5

98 98.5 99 99.5 100 100.5 101 101.5 102 102.5 103 103.5 104 104.5 105 105.5

106 106.5 107 107.5 108 108.5 109 109.5 110 110.5 111 111.5 112 112.5 113

113.5 114 114.5 115 115.5 116 116.5 117 117.5 118 118.5 119 119.5 120 120.5

121 121.5 122 122.5 123 123.5

124 124.5 125 125.5 126 126.5 127 127.5 128 128.5 129 129.5 130 130.5 131

131.5 132 132.5 133 133.5 134 134.5 135 135.5 136 136.5 137 137.5 138 138.5

139 139.5 140 140.5 141 141.5 142 142.5 143 143.5 144 144.5 145 145.5 146

146.5 147 147.5 148 148.5 149

149.5 150 150.5 151 151.5 152 152.5 153 153.5 154 154.5 155 155.5 156 156.5

157 157.5 158 158.5 159 159.5 160 160.5 161 161.5 162 162.5 163 163.5 164

164.5 165 165.5 166 166.5 167 167.5 168 168.5 169 169.5 170 170.5 171 171.5

172 172.5 173 173.5 174 174.5

175 175.5 176 176.5 177 177.5 178 178.5 179 179.5 180

0 22.5 45 67.5 90

749.2538 762.9078 762.6108 762.6108 762.3138 761.7219 761.4249 760.8308

760.2368 759.6428 758.7518 757.8628 756.9718 755.7838 754.8928 753.4098

752.2218 750.7368 749.2538 747.7688 746.2858 744.5038 742.7217 740.9417

738.8627 737.0827 735.0037 732.9267

730.5527 728.4737 726.0997 723.7236 721.0526 718.3816 716.0056 713.3346

710.6636 707.6936 704.7256 702.0546 699.0845 696.1165 692.8515 689.8835

686.9155 683.9454 680.6804 677.4154 673.8534 670.5884 667.0264 663.4623

659.6033 655.7443 651.8853 648.0263

643.8702 640.0112 635.8552 631.6992 627.5452 623.3892 619.5301 615.3741

610.9211 606.7651 602.312 597.859 593.406 589.25 584.7969 580.3439 575.8929

571.1429 566.3929 561.3458 556.5958 551.5508 546.8008 541.4567 536.7067

531.3647 526.3177 520.9736 515.9286

510.5846 505.5376 500.4925 495.4455 490.1015 485.0564 479.7124 474.6654

469.3214 463.9793 458.6353 453.5883 448.2462 442.9023 437.2632 431.9192

426.2782 420.6391 414.9981 409.3591 403.718 398.077 392.438 386.797 380.8609

375.2199 369.2839 363.6429

357.7068 352.0658 346.1297 340.1917 334.5527 328.6147 322.6786 316.7406

310.5076 304.5695 298.3365 292.3094 286.1357 279.9304 273.6677 267.403

261.1699 254.8478 248.5831 242.3203 236.1744 229.7335 223.2034 217.0575

210.9433 204.7973 198.7128 192.5966
186.3635 180.1879 174.044 167.7812 161.5462 155.3132 149.0485 142.8451
136.5527 130.3474 124.144 118.0278 111.9433 105.9161 99.891 94.0421 88.2545
82.4947 76.9151 71.3632 65.9597 60.6771 55.4519 50.3752 45.3895 40.5801
35.9192 31.4662 27.1913 23.1838
19.4139 15.9113 12.7057 9.8267 7.2725 5.1361 3.4135 2.1067 1.2771 0.8613
0.6237 0.594 0.594 0.594 0.594 0.594 0.594 0.594 0.594 0.594 0.594 0.5643
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0.594 0.594 0.594 0.594 0.6237
0.6237 0.6237 0.6237 0.6237 0.6534 0.6534 0.6534 0.6831 0.6831 0.6831 0.7128
0.7128 0.7425 0.7425 0.7425 0.7722 0.7722 0.7722 0.8019 0.8316 0.8316 0.8316
0.8613 0.8613 0.891 0.891 0.9207 0.9207 0.9504 0.9504 0.9801 0.9801 1.0098
1.0395 1.0395 1.0692
1.0692 1.0989 1.0989 1.1286 1.1583 1.188 1.188 1.2177 1.2177 1.2474 1.2474
1.2771 1.3068 1.3365 1.3365 1.3662 1.3662 1.3959 1.4256 1.4553 1.4553 1.485
1.5147 1.5147 1.5444 1.5741 1.5741 1.6038 1.6335 1.6335 1.6632 1.6929 1.6929
1.7226 1.7226 1.7523 1.782
1.782 1.8117 1.8117 1.8414 1.8711 1.8711 1.9008 1.9305 1.9305 1.9602 1.9879
1.9879 1.9879 2.0176 2.0473 2.0473 2.077 2.077 2.1067 2.1067 2.1067 2.1364
2.1364 2.1661 2.1661 2.1958 2.1958 2.2255 2.2552 2.2849 2.3146 2.374 2.4037
2.4334 2.4631 2.5225 2.5522
2.5819 2.6116 2.671 2.671 2.7304 2.7601 2.7898 2.8195 2.8492 2.8789 2.9086
2.9383 2.968 3.0274 3.0571 3.0868 3.1165 3.1462 3.1759 3.2056 3.2056 3.2353
3.265 3.265 3.2947 3.3244 3.3244 3.3244 3.3541 3.3541 3.3838 3.3838 3.3838
3.4135 3.4135 3.4135 3.4432
3.4432 3.4432 3.4729 3.4729 2.7304
749.2538 748.0658 748.0658 747.7688 747.4718 747.1748 746.8778 746.2858
745.6918 745.0978 744.2068 743.6127 742.4268 741.5358 740.6447 739.4567
738.2707 736.7857 735.3007 733.8177 732.3327 730.5527 729.0677 727.2857
725.5057 723.4266 721.6467 719.5676
717.1936 715.1146 712.7406 710.6636 708.2876 705.6166 703.2405 700.5695
697.8985 695.5225 692.5545 689.8835 686.9155 683.9454 680.9774 678.0094
675.0414 671.7744 668.8064 665.5414 662.2764 659.0113 655.4473 652.1823
648.6203 645.0583 641.4962 637.9342
634.0752 630.5132 626.6542 622.7952 618.9361 615.0771 610.9211 607.0621
602.9061 598.75 594.594 590.438 586.282 581.8289 577.6729 573.2199 568.7669
564.3138 559.8628 555.4098 550.6598 545.9098 541.4567 536.7067 531.9587
526.9117 522.1616 517.4116 512.6636
507.6165 502.8665 497.8195 493.0695 488.0245 482.9774 477.9304 472.8854
467.8383 463.0883 458.0413 452.6993 447.6523 442.3082 437.2632 431.9192
426.5752 421.2331 415.8891 410.5451 404.906 399.562 393.923 388.5789 382.9379
377.5959 371.9549 366.3139
360.9718 355.3308 349.6918 344.0508 338.4117 332.7707 327.1297 321.1936
315.5526 309.6165 303.6785 297.7425 291.8936 285.9576 279.9898 273.9944
268.1158 262.1203 256.212 250.276 244.3676 238.491 232.5827 226.6169 220.6789
214.7726 208.9237 203.0767
197.1684 191.2918 185.3834 179.388 173.4203 167.4545 161.4868 155.5211
149.5831 143.7064 137.8278 132.07 126.3398 120.6711 115.1192 109.6267
104.1658 98.8218 93.5669 88.403 83.3263 78.3684 73.4699 68.7515 64.0906
59.6079 55.244 51.0286 46.9913 43.1323
39.4812 36.038 32.8027 29.803 27.0428 24.5203 22.2334 20.2158 18.3744 16.7726
15.3767 14.1887 13.1512 12.2899 11.5177 10.8643 10.30 9.8267 9.4109 9.0842
8.7872 8.5496 8.3417 8.1635 8.015 7.8962 7.7774 7.6883 7.5992 7.5398 7.4507
7.3913 7.3319 7.2428
7.1834 7.124 7.0646 7.0052 6.9161 6.8567 6.7973 6.7379 6.6785 6.6191 6.5597
6.5003 6.4409 6.4112 6.3518 6.2627 6.2033 6.1142 6.0251 5.9657 5.8786 5.7895

5.7004 5.641 5.5816 5.5222 5.4925 5.4331 5.3737 5.3143 5.2549 5.2252 5.1658
5.1361 5.1064 5.1064
5.0767 5.0767 5.047 5.047 5.047 5.0173 5.0173 4.9876 4.9876 4.9579 4.8985
4.8688 4.8094 4.75 4.7203 4.6906 4.6312 4.6015 4.5421 4.4827 4.4233 4.3639
4.3045 4.2154 4.156 4.0669 4.0075 3.9184 3.8293 3.7699 3.7105 3.6511 3.6214
3.562 3.5323 3.4729 3.4432
3.3838 3.3541 3.3244 3.2947 3.2353 3.2056 3.1759 3.1462 3.0868 3.0571 3.0274
3.0274 2.9977 2.9977 2.968 2.968 2.9383 2.9383 2.9086 2.8789 2.8789 2.8789
2.8492 2.8195 2.8195 2.7898 2.7898 2.7601 2.7601 2.7304 2.7007 2.7007 2.671
2.671 2.6413 2.6413 2.6413
2.6413 2.6116 2.6116 2.6116 2.6116 2.6116 2.6116 2.6116 2.6116 2.6116 2.6116
2.6116 2.5819 2.6116 2.6116 2.6116 2.6116 2.6413 2.671 2.7007 2.7304 2.7601
2.7898 2.8195 2.8492 2.8492 2.8789 2.9086 2.9383 2.968 2.9977 3.0274 3.0571
3.0868 3.1462 3.1759
3.2056 3.2353 3.265 3.2947 3.2947 3.2947 3.2947 3.2947 3.265 2.7304
749.2538 746.8778 746.8778 746.5807 746.2858 745.9888 745.6918 745.3948
744.8008 744.2068 743.3157 742.7217 741.8328 740.9417 740.0507 739.1597
737.9737 736.7857 735.5977 734.1147 732.6297 731.1447 729.3647 727.5827
726.0997 724.0206 722.2407 720.1616
718.0846 716.3026 713.9286 711.8496 709.7726 707.3966 705.0226 702.6486
700.2725 697.8985 695.2255 692.5545 689.8835 687.2105 684.5395 681.5714
678.9004 675.6334 672.6654 669.6974 666.4324 663.1674 659.9003 656.6353
653.3703 650.1053 646.5433 643.2783
639.7142 636.1522 632.5902 629.0282 625.7632 621.9041 618.3421 614.7801
610.9211 607.0621 602.9061 599.047 594.891 590.735 586.579 582.4229 578.2669
573.8139 569.3609 564.9078 560.4548 556.0038 551.5508 547.0978 542.6447
538.1917 533.7387 528.9887
524.2407 519.7876 515.0376 510.2876 505.5376 500.7895 495.7425 490.9925
485.9455 481.1954 476.1504 471.4004 466.3534 461.3083 456.5583 451.5113
446.4643 441.4192 436.3722 431.3252 426.2782 421.2331 416.1861 410.8421
405.797 400.453 395.109 389.767
384.4229 379.0789 373.4399 368.0959 362.7518 357.1128 351.7688 346.1297
340.7857 335.1447 329.8027 324.1617 318.5226 312.8816 307.2406 301.6015
295.9308 290.2621 284.5913 278.8632 273.1331 267.403 261.7342 256.0635
250.4542 244.7537 239.085 233.3252
227.6267 221.9857 216.1962 210.5869 204.9161 199.3068 193.7549 188.2327
182.7124 177.2496 171.8185 166.4447 161.1304 155.8181 150.5632 145.3676
140.1741 135.0974 130.0504 125.0627 120.1068 115.2677 110.488 105.7676
101.2255 96.6854 92.3215 88.0169 83.8312
79.7643 75.8756 72.076 68.4248 64.9222 61.5661 58.3605 55.3034 52.3948
49.6327 46.9913 44.5579 42.2413 40.1049 38.0853 36.2459 34.5233 32.8918
31.4068 30.0406 28.7654 27.6071 26.5082 25.5301 24.6391 23.8075 23.0353
22.3225 21.6711 21.1068 20.5722 20.097
19.6515 19.2654 18.8793 18.5526 18.2556 17.9883 17.723 17.5151 17.3072
17.0993 16.9508 16.7726 16.6241 16.5053 16.3568 16.238 16.1192 16.0004
15.8816 15.7628 15.644 15.5252 15.4361 15.3173 15.1985 15.0797 14.9609
14.8421 14.7233 14.6045 14.4857 14.3669
14.2184 14.0996 13.9808 13.862 13.7452 13.567 13.3888 13.2403 13.1512 13.0918
13.0027 12.9136 12.8245 12.7057 12.6166 12.4978 12.3493 12.2305 12.082
11.9038 11.7553 11.5771 11.4286 11.2504 11.1019 10.9237 10.8049 10.6564
10.5079 10.3594 10.1812 9.9733
9.8267 9.6485 9.4703 9.3218 9.1733 9.0545 8.906 8.7872 8.6684 8.5496 8.4011
8.2823 8.1932 8.0744 7.9556 7.8368 7.718 7.5992 7.4804 7.3913 7.2725 7.1834
7.0646 6.9458 6.8567 6.7379 6.6191 6.5003 6.3518 6.233 6.0845 5.938 5.7895
5.641 5.4925 5.344 5.1658
5.0173 4.8985 4.7797 4.6906 4.6015 4.5124 4.4233 4.3639 4.3045 4.2748 4.2154

4.1857 4.156 4.1263 4.0669 4.0372 3.9778 3.9184 3.859 3.7996 3.7699 3.7105
3.6511 3.5917 3.5323 3.4729 3.4432 3.3838 3.3244 3.2947 3.265 3.2353 3.2056
3.1462 3.0868 3.0274 2.968
2.9383 2.8789 2.8195 2.7898 2.7601 2.7007 2.7007 2.7007 2.7007 2.7007 2.7304
2.7304 2.7601 2.7898 2.8195 2.8492 2.9086 2.9383 2.968 2.968 2.9383 2.7304
749.2538 746.8778 746.5807 746.5807 746.2858 745.9888 745.6918 745.0978
744.8008 744.2068 743.6127 742.7217 742.1298 741.2388 740.3477 739.4567
738.5657 737.3797 736.1917 734.7067 733.2237 732.0357 730.2557 728.7707
727.2857 725.5057 723.7236 721.6467
719.8646 717.7876 715.7086 713.6316 711.5526 709.4756 707.0996 705.0226
702.6486 700.2725 697.8985 695.5225 692.8515 690.4775 687.8045 684.8365
682.1655 679.1954 676.5244 673.5564 670.2914 667.3214 664.3533 661.0883
657.8233 654.5583 651.2933 648.0263
644.7612 641.4962 638.2312 634.6692 631.4042 627.8402 624.5751 621.0131
617.1541 613.5921 610.0301 606.1711 602.312 598.453 594.297 590.438 586.282
582.1259 577.9699 573.8139 569.6579 565.2048 561.0488 556.5958 552.4398
547.9888 543.5358 539.0827 534.6297
530.1767 525.4266 520.9736 516.2256 511.7726 507.0226 502.2726 497.5225
492.7745 488.0245 483.2744 478.5244 473.7744 469.0264 464.2763 459.2293
454.4793 449.7293 444.6842 439.6372 434.8872 429.8402 424.7951 419.7481
414.7011 409.6561 404.609 399.265
394.218 388.8759 383.8289 378.4849 373.1429 368.0959 362.7518 357.4098
352.0658 346.7218 341.3797 335.7387 330.3967 325.0526 319.7086 314.0696
308.7256 303.3815 297.7425 292.2797 286.8188 281.4154 276.0417 270.6403
265.2665 259.9225 254.5805 249.2365
243.833 238.2831 232.9391 227.597 222.2827 216.8199 211.4185 206.1635
200.9383 195.7745 190.6087 185.5022 180.3958 175.3805 170.3632 165.4052
160.5067 155.6399 150.8305 146.0507 141.3304 136.6992 132.1294 127.6169
123.1639 118.7406 114.4658 110.2801
106.124 102.0868 98.1684 94.3391 90.6286 87.0665 83.5639 80.2098 76.9151
73.7669 70.7395 67.8605 65.0707 62.4571 59.9049 57.5289 55.2737 53.1076
51.0286 49.10 47.2586 45.5083 43.8748 42.3304 40.8771 39.5109 38.2041 36.9884
35.8598 34.7906 33.7808 32.8324
31.9711 31.1692 30.397 29.6861 29.0327 28.409 27.815 27.2804 26.7755 26.33
25.8845 25.5004 25.1143 24.7579 24.4312 24.1342 23.8669 23.5996 23.362
23.1244 22.9165 22.7086 22.5304 22.3522 22.174 21.9958 21.8473 21.6711
21.5226 21.3444 21.1959 21.0177
20.8692 20.7207 20.5722 20.394 20.2455 20.097 19.9188 19.7406 19.5921 19.4139
19.2654 19.0872 18.909 18.7011 18.5229 18.3447 18.1665 18.018 17.8398 17.6933
17.5151 17.3666 17.1884 17.0399 16.8914 16.7132 16.5053 16.2677 16.0598
15.8816 15.7034 15.5252
15.347 15.1391 14.9015 14.6639 14.3966 14.159 13.9214 13.6858 13.4482 13.2403
13.0621 12.8542 12.6166 12.4384 12.2602 12.0523 11.8741 11.6959 11.5177
11.3395 11.1613 10.9831 10.7752 10.597 10.3891 10.2109 10.003 9.797 9.5891
9.3812 9.1733 8.9951 8.8169
8.609 8.4308 8.2526 8.0447 7.8665 7.6883 7.5398 7.3616 7.1834 7.0052 6.827
6.6191 6.4112 6.1439 5.9083 5.6707 5.4331 5.2252 5.047 4.8985 4.7797 4.6906
4.6015 4.5421 4.4827 4.4233 4.3936 4.3342 4.2748 4.1857 4.1263 4.0372 3.9778
3.8887 3.7699 3.6808 3.5917
3.4729 3.3541 3.2353 3.1462 3.0274 2.9086 2.8195 2.7601 2.671 2.6116 2.5225
2.4631 2.4037 2.3443 2.2849 2.2552 2.1958 2.1364 2.1067 2.077 2.077 2.1067
2.1364 2.1661 2.1067 2.7304
749.2538 746.5807 746.5807 746.5807 746.2858 745.9888 745.6918 745.0978
744.5038 744.2068 743.6127 742.7217 742.1298 741.2388 740.3477 739.4567
738.5657 737.3797 736.1917 735.0037 733.5207 732.0357 730.8477 729.0677
727.5827 725.8027 724.0206 722.2407

720.1616 718.3816 716.3026 714.5226 712.1466 710.0696 707.9906 705.6166
703.2405 701.1635 698.7895 696.4135 693.7425 691.3665 688.9925 686.3215
683.6484 680.6804 678.0094 675.0414 672.0714 669.4004 666.1354 662.8704
659.9003 656.6353 653.3703 650.1053
646.8403 643.5732 640.3082 637.0432 633.7782 630.2162 626.6542 623.3892
619.8251 616.2631 612.7011 609.1391 605.5771 601.718 597.859 593.703 589.844
585.688 581.5319 577.3759 573.2199 569.0639 564.9078 560.4548 556.0038
551.5508 547.3948 542.9417 538.4887
534.0357 529.5827 525.1296 520.3816 515.9286 511.4756 506.7256 502.2726
497.5225 493.0695 488.3215 483.5714 478.8214 474.0714 469.3214 464.5733
459.5263 454.7763 450.0263 444.9812 440.2312 435.1842 430.1372 425.0921
420.0451 414.9981 409.9511 404.906
399.859 394.812 389.767 384.4229 379.3759 374.0339 368.9868 363.6429 358.3008
352.9568 347.6128 342.2707 336.9267 331.5827 326.2406 320.8966 315.5526
310.2106 304.8665 299.5225 294.0914 288.7771 283.4924 278.2692 273.1034
267.9079 262.7143 257.6079
252.5015 247.2782 241.8154 236.5902 231.4858 226.2902 221.065 215.6042
210.4087 205.1834 200.077 194.9132 189.8662 184.8191 179.8632 174.8459
170.0365 165.227 160.4473 155.7587 151.1275 146.5259 142.0135 137.5902
133.2263 128.8921 124.6192 120.4632
116.3072 112.2403 108.2624 104.3143 100.5741 96.8339 93.2105 89.6782 86.2646
82.9402 79.7643 76.7072 73.7966 70.9771 68.3357 65.7815 63.3778 61.0632
58.8357 56.7587 54.7688 52.8403 51.0286 49.3079 47.6744 46.1003 44.6173
43.1917 41.8552 40.5801 39.3921
38.2635 37.1963 36.1865 35.2658 34.3748 33.5749 32.8027 32.0899 31.4068
30.7534 30.1891 29.6267 29.1218 28.6466 28.2011 27.7556 27.3695 27.0131
26.6567 26.33 26.033 25.7657 25.5004 25.2331 25.0252 24.7876 24.5797 24.3718
24.1936 23.9857 23.8075 23.6293
23.4214 23.2432 23.0947 22.9165 22.7383 22.5601 22.3819 22.2037 22.0255
21.8473 21.6711 21.4929 21.3147 21.1365 20.9286 20.7504 20.5722 20.3643
20.1564 19.9188 19.7109 19.5327 19.3545 19.1763 18.9981 18.8199 18.6417
18.4635 18.2853 18.1071 17.9586 17.8121
17.6339 17.426 17.2478 17.0399 16.8023 16.5944 16.3568 16.0895 15.8222
15.5549 15.2579 14.9906 14.7233 14.456 14.1887 13.9511 13.6858 13.4185
13.0918 12.7948 12.5572 12.379 12.2305 12.0523 11.8741 11.7256 11.5771
11.4286 11.2801 11.1316 11.0128 10.8643
10.7158 10.5673 10.4188 10.2703 10.1218 9.9733 9.797 9.6485 9.4703 9.2327
8.9951 8.8169 8.6387 8.4605 8.312 8.1635 7.9853 7.8071 7.5992 7.421 7.2131
7.0052 6.827 6.6488 6.5003 6.3518 6.2033 6.0251 5.5222 4.1263 2.968 2.9086
2.8789 2.8492 2.8195 2.7601
2.7304 2.7007 2.6413 2.6116 2.5522 2.5225 2.4631 2.4334 2.374 2.3146 2.2849
2.2255 2.1958 2.1364 2.1067 2.0473 2.0176 1.9879 1.9305 1.9008 1.8414 1.8117
1.782 1.782 1.8117 1.8414 1.8711 1.8117 2.7304