



Filename: RRSFR48LS45W4800LDMV40KWH

Manufacturer: TEXAS FLUORESCENTS

Lamp Output: Total luminaire Lumens: 4665.8

Max Candela: 1,270.5 at Horizontal: 0°, Vertical: 6°

Input Wattage: 46.3

Luminous Opening: Rectangle w/Luminous Sides (L: 47.99", W: 2.87", H: 3.39")

Test: RRSFR48LS45W4800LDMV40KWH

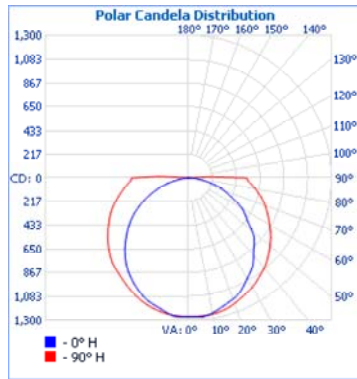
Test Date: 01-Feb-2017 18:20:35

Test Lab: Radiant Vision Systems ProSource

Photometry: Type C

Roadway Summary

| | |
|------------------------|---------------------|
| Cutoff Classification: | N/A |
| Distribution: | TYPE II, VERY SHORT |
| Max Cd, 90 Deg Vert: | 530.2 |
| Max Cd, 80 to <90 Deg: | 614.6 |
| Lumens % Lamp | |
| Downward Street Side: | 2,318.0 49.7% |
| Downward House Side: | 2,246.2 48.1% |
| Downward Total: | 4,564.3 97.8% |
| Upward Street Side: | 50.7 1.1% |
| Upward House Side: | 51.5 1.1% |
| Upward Total: | 102.1 2.2% |
| Total Lumens: | 4,666.4 100% |



Flood Summary

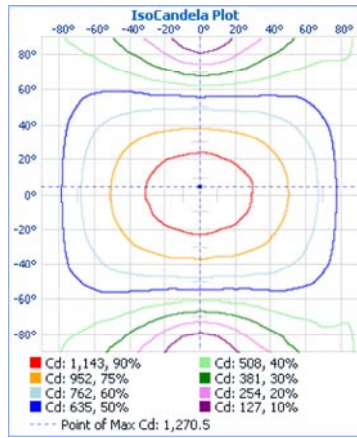
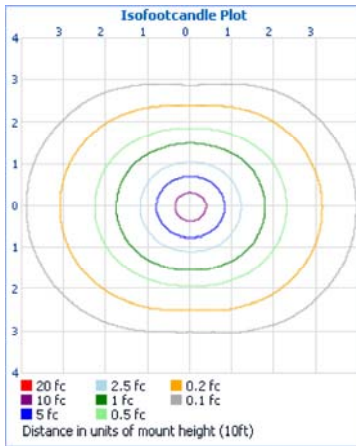
| | Efficiency | Lumens | Horizontal Spread | Vertical Spread |
|--------------|------------|---------|-------------------|-----------------|
| Field (10%): | 99.3% | 4,631.9 | n/a | 160 |
| Beam (50%): | 75.4% | 3,516.2 | 156 | 110.2 |
| Total: | 100% | 4,666.3 | | |

Zonal Lumen Summary

| Zone | Lumens | % Luminaire |
|--------|---------|-------------|
| 0-30 | 997.3 | 21.4% |
| 0-40 | 1,653.0 | 35.4% |
| 0-60 | 3,056.7 | 65.5% |
| 60-90 | 1,507.0 | 32.3% |
| 70-100 | 990.6 | 21.2% |
| 90-120 | 102.1 | 2.2% |
| 0-90 | 4,563.7 | 97.8% |
| 90-180 | 102.1 | 2.2% |
| 0-180 | 4,665.8 | 100% |

Lumens Per Zone

| Zone | Lumens | % Total | Zone | Lumens | % Total |
|-------|--------|---------|---------|--------|---------|
| 0-10 | 120.1 | 2.6% | 90-100 | 102.0 | 2.2% |
| 10-20 | 347.0 | 7.4% | 100-110 | 0.1 | 0% |
| 20-30 | 530.2 | 11.4% | 110-120 | 0 | 0% |
| 30-40 | 655.7 | 14.1% | 120-130 | 0 | 0% |
| 40-50 | 711.1 | 15.2% | 130-140 | 0 | 0% |
| 50-60 | 692.6 | 14.8% | 140-150 | 0 | 0% |
| 60-70 | 618.4 | 13.3% | 150-160 | 0 | 0% |
| 70-80 | 505.9 | 10.8% | 160-170 | 0 | 0% |
| 80-90 | 382.7 | 8.2% | 170-180 | 0 | 0% |



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

| RCC %: | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | | 0 |
|--------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|-----|---|
| RW %: | 70 | 50 | 30 | 0 | 70 | 50 | 30 | 0 | 50 | 30 | 20 | 0 | 50 | 30 | 20 | 0 | 50 | 30 | 20 | 0 | |
| RCR: 0 | 1.19 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | .98 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 1.00 | .98 | |
| 1 | 1.05 | .99 | .93 | .88 | 1.02 | .96 | .91 | .76 | .91 | .87 | .83 | .87 | .83 | .80 | .80 | .83 | .80 | .80 | .77 | .75 | |
| 2 | .94 | .84 | .76 | .69 | .91 | .82 | .75 | .62 | .78 | .72 | .66 | .74 | .69 | .64 | .64 | .71 | .67 | .63 | .60 | .60 | |
| 3 | .85 | .73 | .64 | .56 | .82 | .71 | .63 | .51 | .68 | .61 | .54 | .65 | .58 | .53 | .53 | .62 | .56 | .52 | .49 | .49 | |

| | | | | | | | | | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 4 | .78 | .64 | .55 | .47 | .75 | .63 | .54 | .43 | .60 | .52 | .46 | .57 | .50 | .45 | .55 | .49 | .44 | .41 |
| 5 | .71 | .57 | .47 | .40 | .69 | .56 | .47 | .37 | .53 | .45 | .39 | .51 | .44 | .38 | .49 | .43 | .38 | .35 |
| 6 | .66 | .51 | .42 | .35 | .63 | .50 | .41 | .33 | .48 | .40 | .34 | .46 | .39 | .33 | .44 | .38 | .33 | .31 |
| 7 | .61 | .46 | .37 | .30 | .59 | .45 | .37 | .29 | .44 | .36 | .30 | .42 | .35 | .29 | .40 | .34 | .29 | .27 |
| 8 | .56 | .42 | .33 | .27 | .55 | .41 | .33 | .26 | .40 | .32 | .27 | .38 | .31 | .26 | .37 | .31 | .26 | .24 |
| 9 | .53 | .39 | .30 | .24 | .51 | .38 | .30 | .23 | .37 | .29 | .24 | .35 | .28 | .24 | .34 | .28 | .23 | .21 |
| 10 | .49 | .36 | .27 | .22 | .48 | .35 | .27 | .21 | .34 | .27 | .22 | .33 | .26 | .21 | .32 | .26 | .21 | .19 |

Candela Table - Type C

| | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 | |
|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | |
| 3 | 1268 | 1268 | 1268 | 1267 | 1266 | 1265 | 1265 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 | 1264 |
| 6 | 1270 | 1270 | 1270 | 1269 | 1268 | 1267 | 1266 | 1265 | 1265 | 1264 | 1264 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 | 1263 |
| 9 | 1258 | 1257 | 1257 | 1256 | 1258 | 1260 | 1262 | 1263 | 1263 | 1262 | 1259 | 1256 | 1254 | 1254 | 1254 | 1254 | 1253 | 1251 | 1247 | 1246 | 1245 | 1249 | 1250 | 1253 | 1255 | 1256 | 1256 | 1255 | 1254 | 1253 | 1252 | 1251 | 1251 | 1252 | 1253 | 1256 | 1256 | 1258 |
| 12 | 1236 | 1236 | 1237 | 1239 | 1245 | 1250 | 1253 | 1256 | 1258 | 1257 | 1251 | 1244 | 1240 | 1241 | 1242 | 1237 | 1229 | 1223 | 1220 | 1220 | 1224 | 1230 | 1238 | 1242 | 1245 | 1246 | 1245 | 1244 | 1242 | 1240 | 1240 | 1240 | 1240 | 1238 | 1237 | 1236 | 1236 | |
| 15 | 1213 | 1216 | 1222 | 1226 | 1232 | 1238 | 1240 | 1242 | 1245 | 1247 | 1245 | 1237 | 1231 | 1231 | 1228 | 1219 | 1209 | 1203 | 1202 | 1202 | 1205 | 1211 | 1218 | 1227 | 1230 | 1233 | 1233 | 1233 | 1230 | 1228 | 1228 | 1229 | 1227 | 1224 | 1220 | 1214 | 1213 | 1213 |
| 18 | 1193 | 1200 | 1208 | 1213 | 1216 | 1223 | 1224 | 1223 | 1228 | 1234 | 1237 | 1231 | 1220 | 1215 | 1204 | 1193 | 1183 | 1184 | 1184 | 1186 | 1184 | 1188 | 1195 | 1207 | 1213 | 1217 | 1219 | 1219 | 1218 | 1216 | 1217 | 1217 | 1212 | 1209 | 1203 | 1197 | 1193 | 1193 |
| 21 | 1175 | 1179 | 1185 | 1190 | 1194 | 1202 | 1207 | 1207 | 1209 | 1215 | 1220 | 1215 | 1198 | 1188 | 1176 | 1163 | 1158 | 1158 | 1157 | 1161 | 1158 | 1159 | 1170 | 1184 | 1192 | 1198 | 1200 | 1201 | 1206 | 1205 | 1202 | 1196 | 1188 | 1184 | 1181 | 1178 | 1175 | 1175 |
| 24 | 1149 | 1148 | 1150 | 1154 | 1165 | 1176 | 1186 | 1189 | 1192 | 1196 | 1195 | 1188 | 1170 | 1161 | 1146 | 1133 | 1134 | 1129 | 1124 | 1127 | 1125 | 1120 | 1139 | 1156 | 1164 | 1174 | 1178 | 1180 | 1180 | 1189 | 1189 | 1174 | 1165 | 1154 | 1144 | 1147 | 1150 | 1149 |
| 27 | 1108 | 1110 | 1114 | 1127 | 1142 | 1153 | 1164 | 1169 | 1174 | 1178 | 1166 | 1159 | 1146 | 1135 | 1117 | 1102 | 1097 | 1096 | 1089 | 1086 | 1083 | 1086 | 1111 | 1127 | 1136 | 1149 | 1156 | 1156 | 1171 | 1164 | 1145 | 1136 | 1125 | 1112 | 1111 | 1112 | 1108 | 1108 |
| 30 | 1066 | 1071 | 1084 | 1100 | 1119 | 1128 | 1137 | 1148 | 1154 | 1158 | 1138 | 1138 | 1127 | 1110 | 1087 | 1066 | 1051 | 1053 | 1052 | 1040 | 1045 | 1055 | 1083 | 1100 | 1111 | 1129 | 1134 | 1131 | 1144 | 1141 | 1119 | 1111 | 1100 | 1086 | 1081 | 1070 | 1066 | 1066 |
| 33 | 1032 | 1033 | 1051 | 1065 | 1087 | 1101 | 1105 | 1125 | 1133 | 1133 | 1116 | 1118 | 1106 | 1084 | 1061 | 1035 | 1005 | 1002 | 1011 | 995 | 1005 | 1024 | 1054 | 1073 | 1087 | 1107 | 1109 | 1105 | 1119 | 1113 | 1091 | 1084 | 1071 | 1055 | 1047 | 1031 | 1032 | 1032 |
| 36 | 994 | 993 | 1007 | 1024 | 1049 | 1072 | 1075 | 1100 | 1110 | 1106 | 1095 | 1091 | 1075 | 1044 | 1026 | 1006 | 965 | 948 | 966 | 948 | 962 | 991 | 1017 | 1036 | 1057 | 1080 | 1081 | 1081 | 1094 | 1081 | 1063 | 1052 | 1033 | 1017 | 998 | 989 | 994 | 994 |
| 39 | 940 | 949 | 964 | 977 | 1006 | 1038 | 1049 | 1073 | 1083 | 1081 | 1068 | 1059 | 1036 | 998 | 976 | 958 | 932 | 901 | 917 | 899 | 923 | 947 | 967 | 992 | 1019 | 1046 | 1053 | 1060 | 1066 | 1050 | 1038 | 1016 | 991 | 970 | 952 | 943 | 940 | 940 |
| 42 | 886 | 899 | 918 | 938 | 968 | 997 | 1020 | 1040 | 1050 | 1054 | 1037 | 1025 | 1001 | 963 | 937 | 905 | 891 | 855 | 864 | 850 | 885 | 895 | 926 | 955 | 986 | 1006 | 1021 | 1037 | 1036 | 1017 | 1006 | 978 | 956 | 929 | 903 | 893 | 886 | 886 |
| 45 | 847 | 842 | 873 | 895 | 931 | 957 | 985 | 1006 | 1014 | 1023 | 1009 | 990 | 967 | 934 | 903 | 848 | 837 | 806 | 809 | 802 | 831 | 843 | 894 | 927 | 955 | 971 | 991 | 1007 | 1004 | 984 | 969 | 942 | 918 | 883 | 854 | 837 | 847 | 847 |
| 48 | 803 | 787 | 825 | 847 | 891 | 920 | 950 | 974 | 981 | 989 | 980 | 955 | 932 | 895 | 864 | 802 | 778 | 754 | 754 | 752 | 771 | 801 | 857 | 888 | 919 | 941 | 962 | 973 | 973 | 955 | 931 | 904 | 874 | 833 | 807 | 783 | 803 | 803 |
| 51 | 734 | 742 | 766 | 800 | 845 | 880 | 917 | 939 | 953 | 957 | 948 | 921 | 898 | 848 | 814 | 765 | 712 | 703 | 700 | 701 | 706 | 760 | 800 | 843 | 880 | 907 | 929 | 941 | 940 | 922 | 896 | 861 | 828 | 784 | 755 | 738 | 734 | 734 |
| 54 | 663 | 692 | 719 | 748 | 795 | 838 | 884 | 900 | 923 | 925 | 910 | 892 | 859 | 809 | 759 | 713 | 661 | 647 | 645 | 645 | 659 | 705 | 740 | 805 | 843 | 876 | 887 | 908 | 902 | 889 | 858 | 821 | 782 | 733 | 710 | 689 | 663 | 663 |
| 57 | 615 | 632 | 669 | 701 | 755 | 793 | 848 | 862 | 890 | 890 | 879 | 857 | 820 | 770 | 716 | 657 | 607 | 589 | 583 | 588 | 611 | 647 | 701 | 765 | 807 | 846 | 853 | 872 | 870 | 853 | 821 | 778 | 739 | 687 | 657 | 629 | 615 | 615 |
| 60 | 566 | 574 | 612 | 645 | 714 | 751 | 805 | 831 | 857 | 854 | 851 | 816 | 784 | 726 | 670 | 600 | 558 | 528 | 518 | 529 | 559 | 589 | 659 | 719 | 766 | 809 | 825 | 837 | 839 | 812 | 779 | 733 | 690 | 632 | 597 | 567 | 566 | 566 |
| 63 | 495 | 516 | 561 | 592 | 664 | 714 | 762 | 803 | 822 | 819 | 818 | 782 | 751 | 681 | 613 | 555 | 517 | 469 | 451 | 468 | 513 | 541 | 603 | 676 | 728 | 771 | 794 | 805 | 806 | 773 | 741 | 690 | 641 | 581 | 545 | 508 | 495 | 495 |
| 66 | 421 | 448 | 502 | 551 | 620 | 677 | 718 | 765 | 783 | 785 | 780 | 747 | 709 | 641 | 570 | 515 | 457 | 408 | 385 | 406 | 452 | 505 | 560 | 636 | 687 | 735 | 756 | 772 | 768 | 737 | 702 | 650 | 599 | 538 | 485 | 442 | 421 | 421 |
| 69 | 365 | 386 | 449 | 500 | 577 | 634 | 681 | 721 | 747 | 753 | 743 | 705 | 666 | 599 | 534 | 464 | 400 | 345 | 320 | 344 | 395 | 458 | 526 | 591 | 644 | 696 | 721 | 735 | 730 | 699 | 662 | 610 | 551 | 486 | 432 | 380 | 365 | 365 |
| 72 | 314 | 332 | 396 | 451 | 537 | 593 | 650 | 687 | 716 | 719 | 709 | 667 | 628 | 558 | 502 | 440 | 349 | 283 | 257 | 285 | 343 | 410 | 491 | 549 | 608 | 659 | 691 | 697 | 693 | 661 | 628 | 571 | 508 | 437 | 380 | 327 | 314 | 314 |
| 75 | 251 | 278 | 345 | 407 | 488 | 556 | 614 | 660 | 682 | 684 | 676 | 637 | 588 | 530 | 457 | 378 | 299 | 227 | 198 | 227 | 292 | 365 | 443 | 516 | 575 | 624 | 658 | 659 | 657 | 626 | 594 | 534 | 467 | 394 | 327 | 270 | 251 | 251 |
| 78 | 183 | 223 | 298 | 371 | 446 | 517 | 574 | 621 | 647 | 646 | 644 | 602 | 549 | 497 | 416 | 340 | 253 | 176 | 141 | 174 | 248 | 328 | 406 | 481 | 538 | 588 | 622 | 624 | 622 | 592 | 553 | 493 | 430 | 358 | 280 | 213 | 183 | 183 |
| 81 | 132 | 175 | 260 | 343 | 414 | 483 | 541 | 585 | 615 | 610 | 612 | 565 | 510 | 454 | 376 | 300 | 210 | 124 | 84 | 125 | 210 | 291 | 365 | 437 | 495 | 547 | 582 | 590 | 581 | 556 | 513 | 454 | 398 | 331 | 249 | 167 | 132 | 132 |
| 84 | 81 | 134 | 216 | 315 | 369 | 448 | 512 | 551 | 583 | 577 | 580 | 532 | 483 | 426 | 350 | 270 | 172 | 90 | 41 | 90 | 171 | 259 | 323 | 405 | 464 | 519 | 552 | 558 | 543 | 526 | 481 | 416 | 357 | 294 | 205 | 127 | 81 | 81 |
| 87 | 39 | 97 | 185 | 271 | 344 | 407 | 480 | 518 | 547 | 543 | 542 | 498 | 456 | 386 | 322 | 229 | 143 | 64 | 14 | 62 | 144 | 225 | 302 | 381 | 433 | 484 | 508 | 527 | 515 | 491 | 462 | 391 | 327 | 251 | 166 | 87 | 39 | 39 |
| 90 | 12 | 70 | 151 | 229 | 313 | 379 | 444 | 490 | 512 | 530 | 509 | 461 | 429 | 352 | 284 | 213 | 126 | 42 | 2 | 43 | 115 | 195 | 254 | 341 | 408 | 451 | 481 | 518 | 489 | 457 | 418 | 356 | 298 | 211 | 145 | 59 | 12 | 12 |
| 93 | 1 | 21 | 59 | 94 | 115 | 150 | 175 | 210 | 181 | 192 | 192 | 222 | 184 | 167 | 127 | 114 | 65 | 16 | 1 | 17 | 63 | 124 | 149 | 201 | 245 | 295 | 261 | 268 | 250 | 271 | 223 | 180 | 137 | 106 | 65 | 18 | 1 | 1 |
| 96 | 0 | 1 | 4 | 5 | 8 | 8 | 14 | 22 | 17 | 13 | 25 | 23 | 19 | 18 | 15 | 12 | 10 | 2 | 0 | 2 | 10 | 14 | 22 | 25 | 32 | 41 | 34 | 24 | 29 | 38 | 25 | 16 | 15 | 7 | 5 | 2 | 0 | 0 |
| 99 | 0 | 0 | 1 | 2 | 1 | 2 | 2 | 2 | 3 | 1 | 5 | 2</ | | | | | | | | | | | | | | | | | | | | | | | | | | |

FILE: CREATED USING ABSOLUTE PHOTOMETRY
FILE: CANDELA MULTIPLIER: 1
FILE: VERTICAL ANGLES: 61, HORIZONTAL ANGLES: 37
FILE: COORDINATE SYSTEM: TYPE C
FILE: UNIT OF MEASURE: METRIC
FILE: BALLAST FACTOR: 1

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Reported data calculated from manufacturer's data file, based on IES recommended methods.