

Test Report for Luminous Intensity Distributions

Test Standard : CIE 70 (1987) 、 CIE 84 (1989)

Date of Receipt : 2017 / 01 / 20

Test Date : 2017 / 01 / 20 ~ 2017 / 01 / 23

1. Issue Date for test report : 2017 / 04 / 07
 2. Report No : 17011704-1
 3. Total pages : 19
 4. Test report without steel stamp and paging seal is not valid.
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 6. Test sample is not sampling by laboratory, test result relate only to the items tested.
 7. Test report is not responsible for advertisement or promotion for products.
- Remark : report No.17011704 is replaced by report No.17011704-1, as well as become invalid.

Approved Signatory:



Test Report

Information for test items

Applicant Company : CoolLED Corp

Applicant Address : 5F, -3, No.83, Sec.2, Gongdao 5th Rd., East Dist., Hsinchu
City 30070, Taiwan, R.O.C.

Manufacturer : CoolLED Corp.

Manufacturer's address : 5F, -3, No.83, Sec.2, Gongdao 5th Rd., East Dist.,
Hsinchu City 30070, Taiwan, R.O.C.

Trade Mark : CoolLED

Test item description : floodlight

Model : F2036C-001

Rated voltage(V) : 100~240

Rated frequency(Hz) : 50/60

Rated power(W) : 33

Trademark/model of LED chip : Lumileds / LUXEON 3030 2D

Trademark/model of driver : KEY POWER / KPN-30WY-40V-800

Dimension for test item LxWxH (mm) : 227 × 167 × 40

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Test Content

Test Condition

| | |
|------------------------------|------|
| Temperature (°C) | 25.2 |
| Humidity (% RH) | 59.1 |
| γ Axis measurement of angles | 5° |
| C Axis measurement of angles | 5° |

Electrical Test

| Test item | Test Result |
|-------------------|-------------|
| Voltage(V) | 220.0 |
| Frequency(Hz) | 60 |
| Current (A) | 0.159 |
| Watt (W) | 33.0 |
| Power factor (PF) | 0.943 |

Luminosity Test

| Test item | Test Result |
|---------------------------------------|-----------------------------------|
| Total luminous flux of luminaire (lm) | 3694.6 |
| Initial luminaire efficiency (lm/W) | 112.0 |
| Central intensity (cd) | 1394.8 |
| Max intensity (cd) | 1403.0 |
| Angle for max intensity (°) | C : 110.0 γ : 0.0 |
| Color temperature(K) | 5178 |
| Rendering Index | 83.4 |
| Beam angle (50%Imax) | C0_180 Left=55.0 Right=54.7 |
| | C90_270 Left=54.1 Right=54.9 |

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Diagram for luminous intensity distribution I

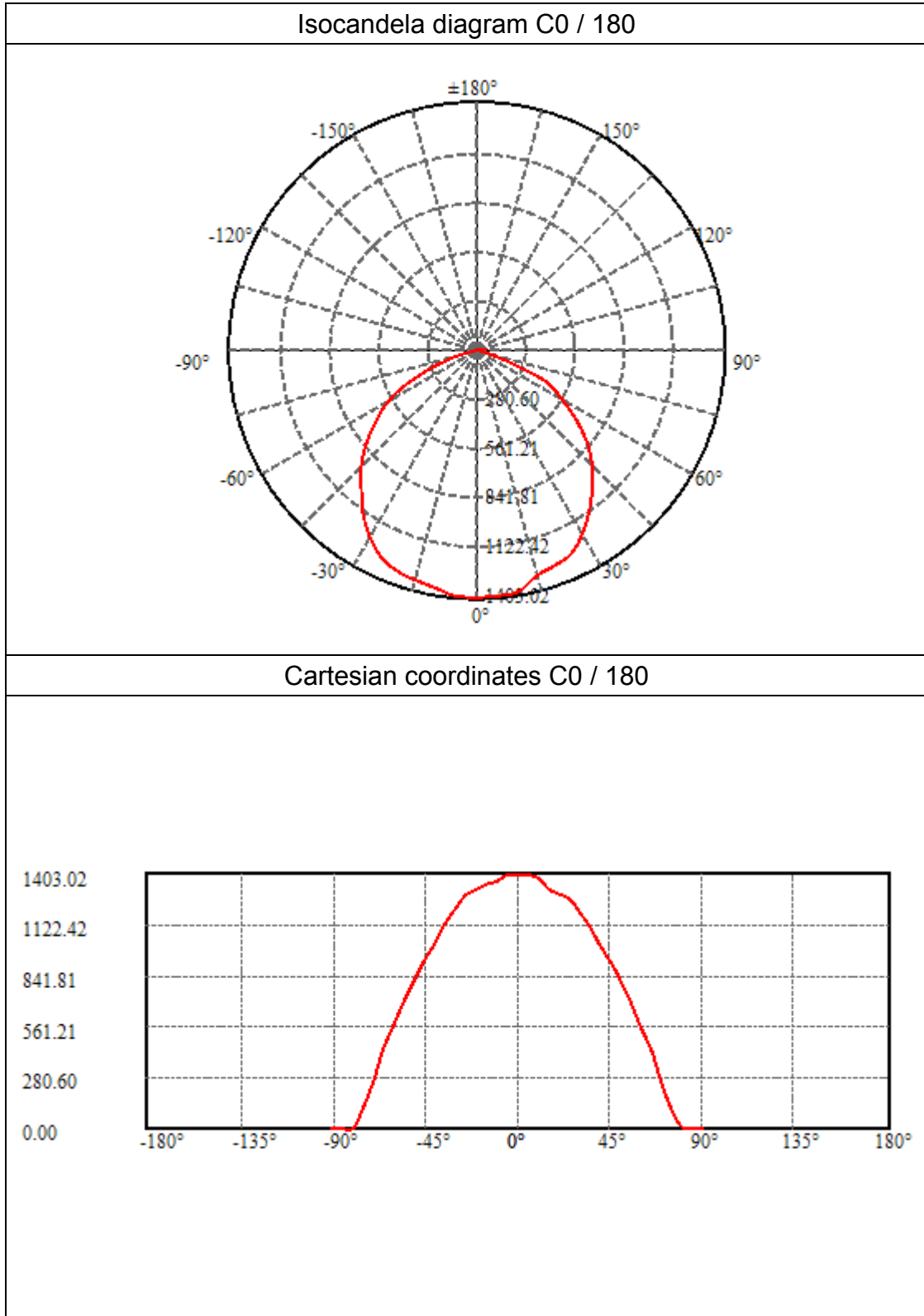


Diagram for luminous intensity distribution II

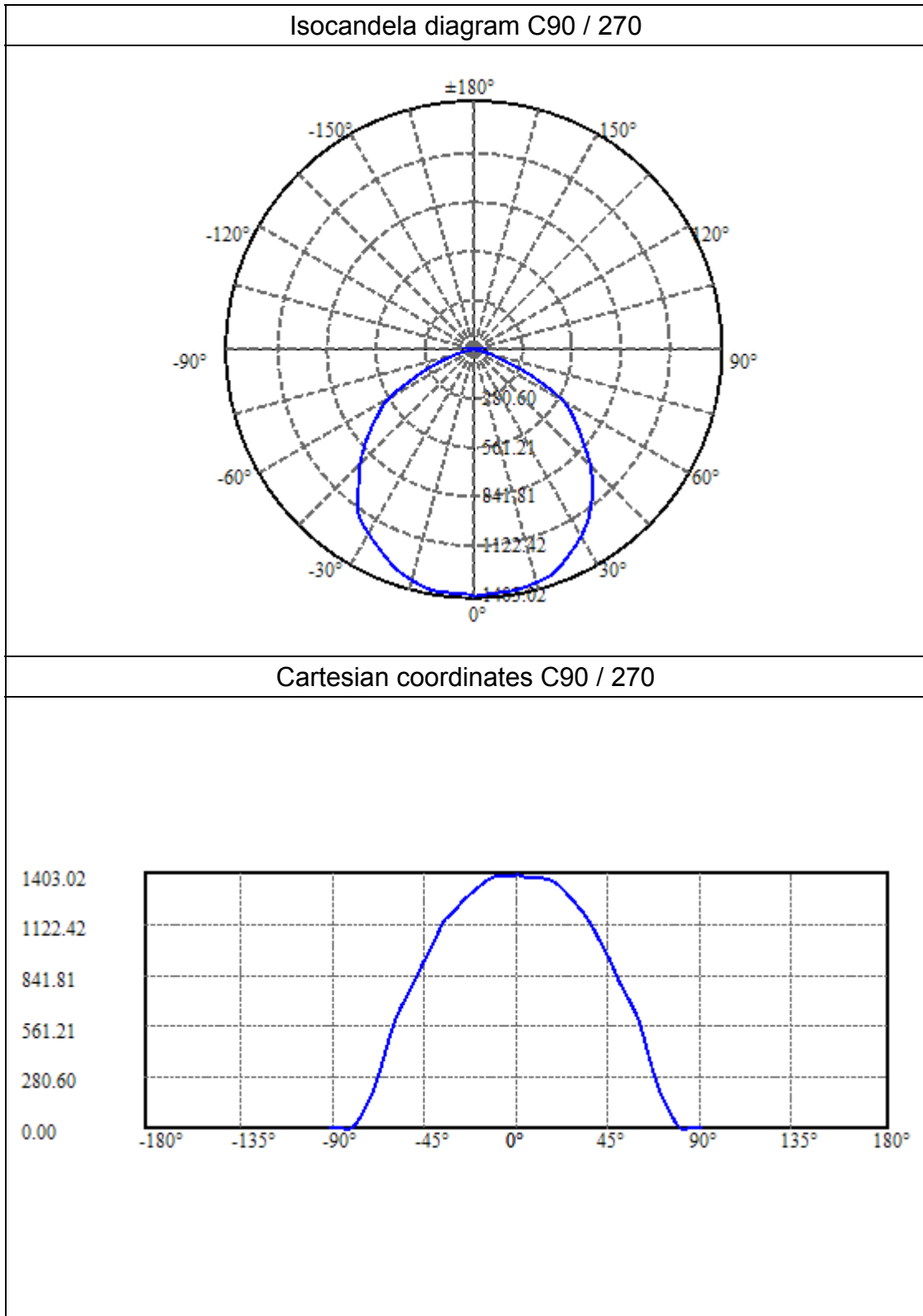
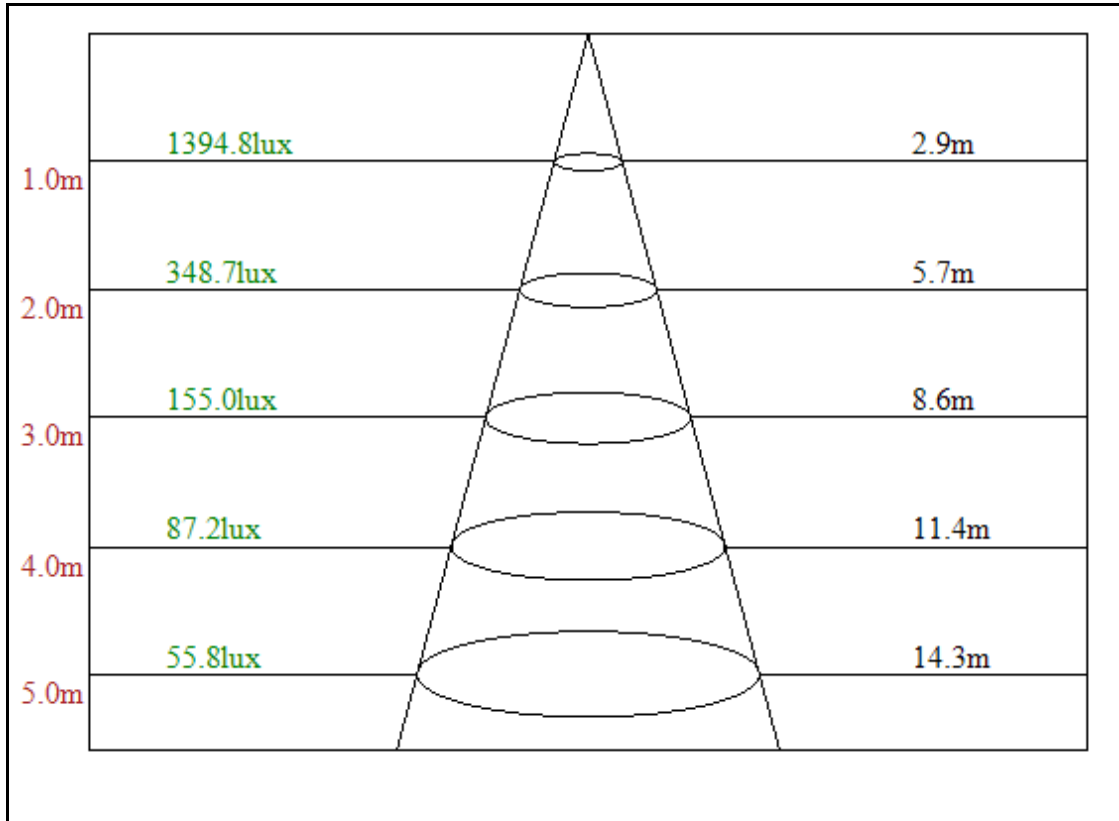


Diagram for illumination distance



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Photo for test items

Photo of product

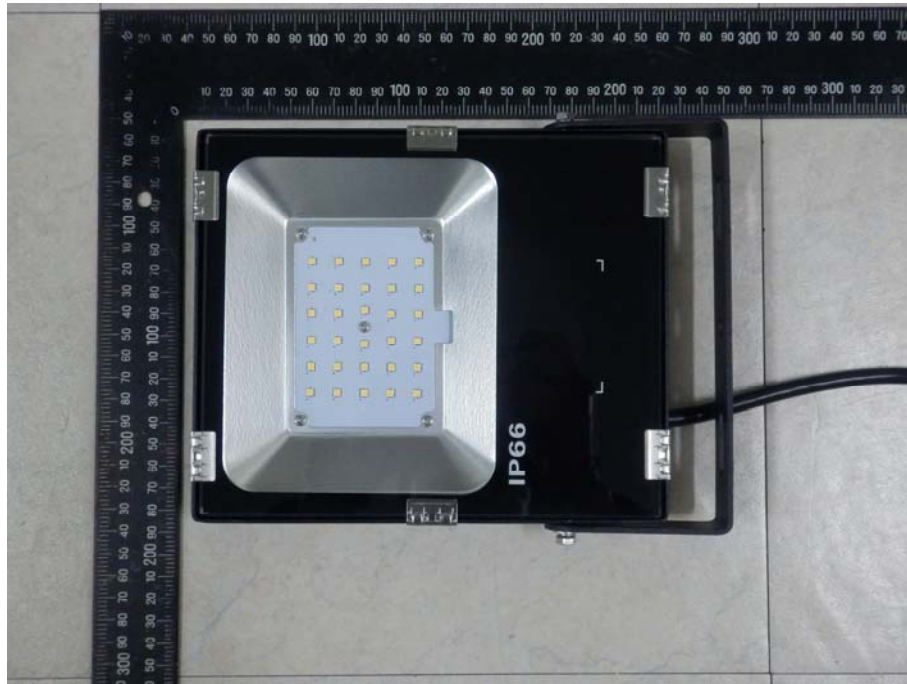


Photo of product

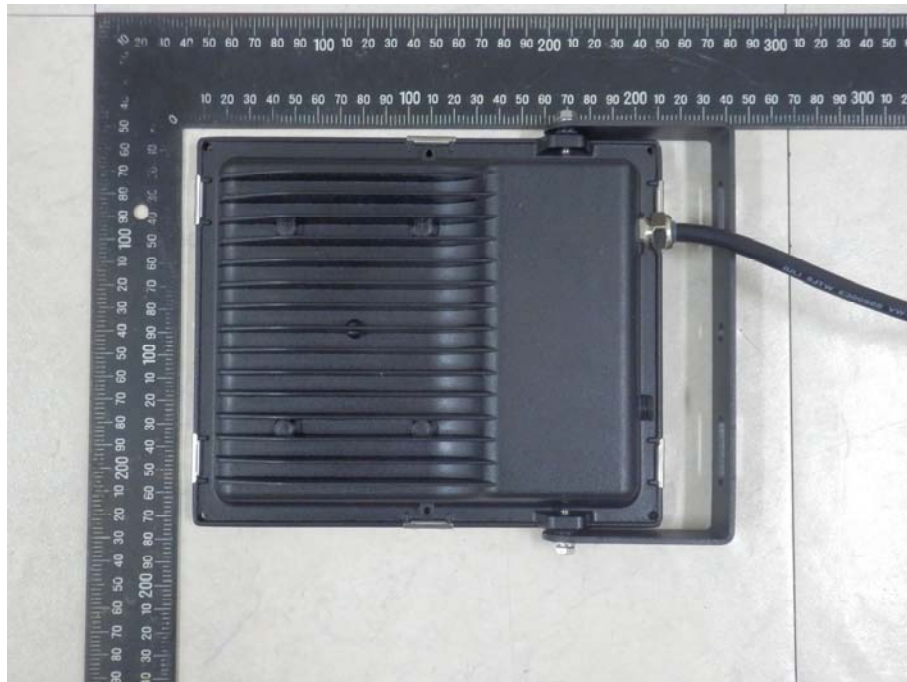
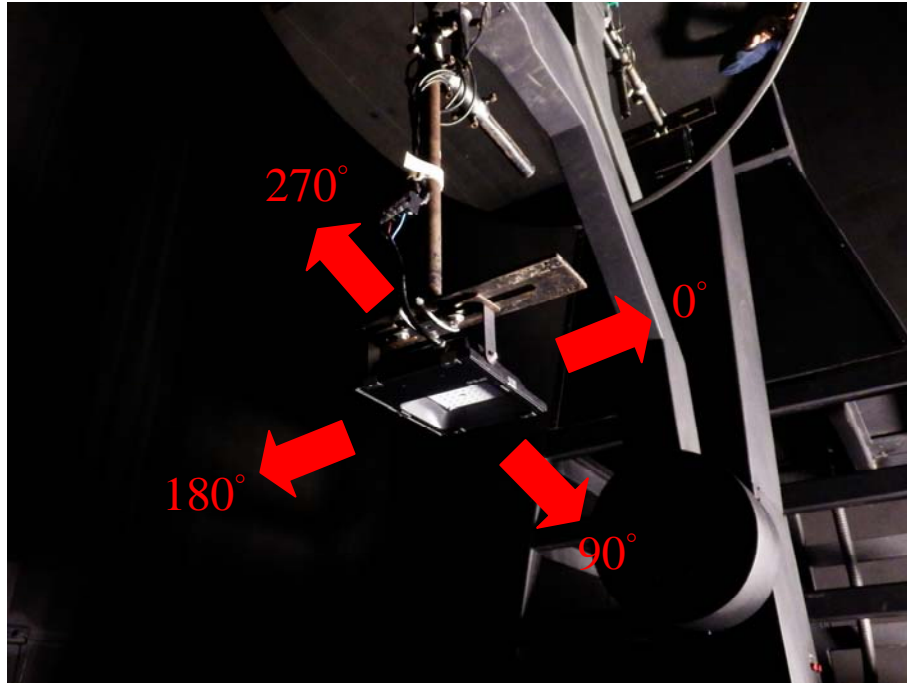


Photo for test items

Direction for luminaire position in goniophotometer



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Data for luminous intensity (1)

Intensity data(cd)

| $\gamma/C(^{\circ})$ | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1394.813 | 1399.341 | 1391.134 | 1397.502 | 1394.742 | 1391.771 | 1388.799 | 1391.983 |
| 5 | 1394.53 | 1394.884 | 1389.719 | 1387.596 | 1382.855 | 1395.945 | 1394.176 | 1384.553 |
| 10 | 1377.266 | 1370.261 | 1368.775 | 1365.237 | 1377.266 | 1368.492 | 1366.935 | 1371.322 |
| 15 | 1312.382 | 1332.619 | 1338.067 | 1341.251 | 1342.878 | 1338.703 | 1340.897 | 1339.199 |
| 20 | 1292.924 | 1296.745 | 1303.042 | 1305.731 | 1300.849 | 1301.274 | 1300.566 | 1300.425 |
| 25 | 1261.297 | 1261.509 | 1256.556 | 1255.07 | 1254.009 | 1258.466 | 1264.693 | 1266.957 |
| 30 | 1191.46 | 1196.838 | 1195.564 | 1193.583 | 1201.083 | 1209.291 | 1208.866 | 1216.225 |
| 35 | 1108.039 | 1110.728 | 1113.487 | 1123.676 | 1127.78 | 1141.365 | 1151.2 | 1153.181 |
| 40 | 1012.306 | 1014.287 | 1023.769 | 1029.854 | 1038.627 | 1053.274 | 1069.123 | 1072.095 |
| 45 | 917.3515 | 921.1016 | 922.5167 | 932.2103 | 945.7954 | 949.8993 | 961.4326 | 974.2393 |
| 50 | 821.4772 | 815.6044 | 811.7836 | 817.5856 | 832.3029 | 844.2606 | 853.4589 | 855.9353 |
| 55 | 691.3569 | 694.0456 | 699.423 | 704.8005 | 715.697 | 722.4188 | 725.4613 | 718.3149 |
| 60 | 561.8027 | 563.5715 | 570.5764 | 579.2086 | 586.9918 | 590.5295 | 587.0625 | 583.3832 |
| 65 | 430.5503 | 435.0079 | 436.2815 | 442.1542 | 446.7534 | 447.8855 | 445.8336 | 448.027 |
| 70 | 249.0611 | 251.6791 | 256.066 | 259.6038 | 260.9482 | 258.9669 | 272.0568 | 299.6517 |
| 75 | 96.08665 | 101.3933 | 113.7756 | 120.5682 | 123.3277 | 124.4598 | 115.4738 | 105.7802 |
| 80 | 12.66532 | 15.2833 | 13.79742 | 15.49556 | 13.08986 | 12.59457 | 17.19371 | 12.59457 |
| 85 | 0.919828 | 0.919828 | 0.919828 | 0.849072 | 0.849072 | 0.849072 | 0.778316 | 0.778316 |
| 90 | 0.35378 | 0.424536 | 0.35378 | 0.35378 | 0.35378 | 0.424536 | 0.424536 | 0.35378 |

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Data for luminous intensity (2)

| Intensity data(cd) | | Page: 2 Total:10 | | | | | | |
|----------------------|----------|------------------|----------|----------|----------|----------|----------|----------|
| $\gamma/C(^{\circ})$ | 40.0 | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 |
| 0 | 1387.525 | 1382.643 | 1387.879 | 1392.337 | 1394.884 | 1397.006 | 1398.705 | 1398.917 |
| 5 | 1375.78 | 1378.327 | 1383.492 | 1387.525 | 1391.912 | 1388.233 | 1385.473 | 1393.327 |
| 10 | 1380.025 | 1387.879 | 1384.2 | 1377.973 | 1373.94 | 1379.105 | 1382.785 | 1381.794 |
| 15 | 1346.77 | 1347.406 | 1347.69 | 1346.911 | 1349.812 | 1352.713 | 1353.987 | 1356.039 |
| 20 | 1291.509 | 1297.028 | 1305.802 | 1315.425 | 1320.873 | 1324.057 | 1320.944 | 1321.298 |
| 25 | 1271.131 | 1261.084 | 1268.089 | 1274.599 | 1278.278 | 1275.377 | 1282.099 | 1286.769 |
| 30 | 1223.088 | 1233.206 | 1223.796 | 1223.654 | 1224.786 | 1230.871 | 1226.343 | 1229.739 |
| 35 | 1160.469 | 1172.285 | 1164.361 | 1159.762 | 1159.266 | 1147.45 | 1148.228 | 1145.61 |
| 40 | 1080.303 | 1081.788 | 1080.869 | 1075.774 | 1069.052 | 1058.227 | 1052.92 | 1044.571 |
| 45 | 976.8573 | 977.4941 | 975.7252 | 967.2345 | 957.541 | 955.5598 | 941.9746 | 942.1868 |
| 50 | 850.4164 | 850.4164 | 850.9824 | 840.4398 | 836.7605 | 829.6849 | 825.864 | 821.2649 |
| 55 | 716.9705 | 711.6639 | 707.2062 | 707.277 | 710.8148 | 705.3666 | 706.994 | 707.0647 |
| 60 | 582.1096 | 583.3124 | 579.9869 | 579.1378 | 580.4822 | 585.0106 | 584.2323 | 581.6851 |
| 65 | 447.6024 | 444.7722 | 444.2769 | 439.3947 | 422.3426 | 373.4502 | 367.0114 | 365.95 |
| 70 | 297.4582 | 257.8349 | 251.4668 | 252.9527 | 246.4432 | 242.41 | 204.2018 | 195.4281 |
| 75 | 113.7756 | 97.14799 | 101.6764 | 96.93571 | 95.87438 | 79.38823 | 79.03445 | 72.94944 |
| 80 | 11.25021 | 9.127524 | 5.023676 | 3.467044 | 2.47646 | 2.547216 | 2.547216 | 2.547216 |
| 85 | 0.70756 | 0.70756 | 0.70756 | 0.778316 | 0.778316 | 0.70756 | 0.70756 | 0.636804 |
| 90 | 0.424536 | 0.35378 | 0.35378 | 0.35378 | 0.35378 | 0.283024 | 0.283024 | 0.283024 |

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Data for luminous intensity (3)

Intensity data(cd)

Page: 3 Total:10

| $\gamma/C(^{\circ})$ | 80.0 | 85.0 | 90.0 | 95.0 | 100.0 | 105.0 | 110.0 | 115.0 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1395.379 | 1387.242 | 1395.379 | 1392.124 | 1394.742 | 1391.983 | 1403.021 | 1390.709 |
| 5 | 1390.497 | 1390.214 | 1379.813 | 1381.865 | 1393.61 | 1393.044 | 1378.115 | 1391.983 |
| 10 | 1379.813 | 1376.912 | 1376.204 | 1383.209 | 1381.299 | 1376.841 | 1384.2 | 1374.365 |
| 15 | 1355.968 | 1364.388 | 1364.459 | 1365.661 | 1356.463 | 1354.907 | 1353.279 | 1354.765 |
| 20 | 1325.614 | 1339.128 | 1342.737 | 1330.567 | 1329.222 | 1327.807 | 1318.963 | 1320.378 |
| 25 | 1287.971 | 1286.273 | 1278.49 | 1283.443 | 1285.212 | 1290.165 | 1282.028 | 1281.25 |
| 30 | 1230.659 | 1224.008 | 1218.772 | 1223.937 | 1228.324 | 1234.268 | 1234.975 | 1236.107 |
| 35 | 1142.214 | 1142.426 | 1142.143 | 1149.077 | 1147.45 | 1153.464 | 1156.436 | 1161.318 |
| 40 | 1045.208 | 1047.047 | 1048.533 | 1046.057 | 1047.26 | 1051.01 | 1062.118 | 1067.142 |
| 45 | 938.3661 | 932.9886 | 932.8471 | 933.6962 | 934.0499 | 942.6115 | 947.9889 | 961.7156 |
| 50 | 816.2412 | 805.8401 | 807.5382 | 816.8073 | 822.397 | 827.0669 | 830.6755 | 838.4586 |
| 55 | 705.8619 | 699.9891 | 695.9561 | 698.4325 | 705.8619 | 711.027 | 713.4327 | 714.7064 |
| 60 | 576.9444 | 577.4397 | 579.9161 | 578.7841 | 583.3832 | 584.7275 | 587.2748 | 587.6286 |
| 65 | 364.3227 | 363.2613 | 364.7472 | 366.0916 | 366.2331 | 368.1434 | 368.7803 | 374.2992 |
| 70 | 195.8526 | 197.5507 | 199.5319 | 198.6829 | 198.8951 | 196.9139 | 198.3998 | 236.6081 |
| 75 | 76.98253 | 76.27497 | 76.55799 | 77.47782 | 76.98253 | 72.73717 | 78.11462 | 80.52032 |
| 80 | 2.617972 | 2.547216 | 2.47646 | 2.547216 | 2.547216 | 2.47646 | 2.47646 | 2.47646 |
| 85 | 0.70756 | 0.70756 | 0.70756 | 0.636804 | 0.636804 | 0.636804 | 0.70756 | 0.70756 |
| 90 | 0.283024 | 0.212268 | 0.212268 | 0.283024 | 0.212268 | 0.283024 | 0.283024 | 0.283024 |

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Data for luminous intensity (4)

Page: 4 Total:10

| Intensity data(cd) | 120.0 | 125.0 | 130.0 | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| γ/C(°) | 1395.804 | 1385.473 | 1378.751 | 1383.846 | 1386.676 | 1391.629 | 1393.469 | 1395.521 |
| 0 | 1389.789 | 1389.153 | 1389.577 | 1381.157 | 1390.851 | 1391.558 | 1393.398 | 1391.771 |
| 5 | 1376.487 | 1376.912 | 1381.723 | 1388.162 | 1376.417 | 1367.006 | 1373.162 | 1370.968 |
| 10 | 1347.548 | 1346.628 | 1346.133 | 1341.463 | 1341.109 | 1343.303 | 1340.189 | 1341.817 |
| 15 | 1321.439 | 1320.095 | 1304.953 | 1307.712 | 1310.472 | 1316.132 | 1316.698 | 1320.024 |
| 20 | 1280.33 | 1285.283 | 1288.255 | 1279.268 | 1285.707 | 1283.372 | 1284.504 | 1288.962 |
| 25 | 1240.99 | 1243.678 | 1246.508 | 1251.037 | 1246.296 | 1236.32 | 1230.942 | 1227.97 |
| 30 | 1170.658 | 1187.356 | 1188.205 | 1191.177 | 1193.3 | 1182.191 | 1168.111 | 1160.894 |
| 35 | 1079.666 | 1097.638 | 1105.492 | 1096.647 | 1091.624 | 1101.246 | 1082.072 | 1067.849 |
| 40 | 972.6827 | 979.7583 | 989.7349 | 986.4094 | 985.065 | 997.8011 | 976.5743 | 964.0505 |
| 45 | 845.1804 | 848.7182 | 853.0344 | 854.3787 | 865.5581 | 866.3365 | 862.3034 | 854.7324 |
| 50 | 714.0695 | 714.2819 | 712.8668 | 716.7583 | 723.1971 | 729.0698 | 735.5794 | 737.4897 |
| 55 | 589.6805 | 585.5059 | 585.1522 | 586.5673 | 588.0531 | 593.5721 | 598.1005 | 604.2562 |
| 60 | 413.9226 | 448.2393 | 456.8715 | 456.1639 | 455.5979 | 457.6498 | 460.9046 | 464.6547 |
| 65 | 245.5233 | 258.4717 | 259.7453 | 259.3207 | 301.1375 | 300.9253 | 272.6936 | 273.6135 |
| 70 | 81.86469 | 95.94514 | 97.43102 | 97.71404 | 113.3511 | 107.4784 | 110.5916 | 129.8373 |
| 75 | 2.405704 | 2.47646 | 6.580308 | 9.339792 | 11.03794 | 13.16062 | 9.835084 | 9.622816 |
| 80 | 0.70756 | 0.778316 | 0.70756 | 0.70756 | 0.70756 | 0.778316 | 0.778316 | 0.778316 |
| 85 | 0.283024 | 0.283024 | 0.35378 | 0.35378 | 0.35378 | 0.35378 | 0.35378 | 0.35378 |
| 90 | | | | | | | | |

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Data for luminous intensity (5)

Intensity data(cd)

Page: 5 Total:10

| $\gamma/C(^{\circ})$ | 160.0 | 165.0 | 170.0 | 175.0 | 180.0 | 185.0 | 190.0 | 195.0 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1394.247 | 1392.903 | 1394.105 | 1398.139 | 1398.492 | 1399.907 | 1398.422 | 1387.596 |
| 5 | 1383.634 | 1384.27 | 1386.959 | 1391.275 | 1392.478 | 1391.346 | 1386.322 | 1383.563 |
| 10 | 1367.501 | 1370.261 | 1371.888 | 1363.68 | 1362.407 | 1368.916 | 1369.907 | 1373.94 |
| 15 | 1347.053 | 1347.619 | 1340.755 | 1332.76 | 1342.1 | 1333.68 | 1340.614 | 1346.557 |
| 20 | 1320.448 | 1320.802 | 1315.991 | 1319.741 | 1319.882 | 1318.326 | 1320.802 | 1315.354 |
| 25 | 1282.17 | 1273.75 | 1275.66 | 1281.957 | 1282.523 | 1285 | 1275.872 | 1274.245 |
| 30 | 1228.253 | 1217.64 | 1207.593 | 1208.3 | 1212.404 | 1204.621 | 1208.866 | 1215.8 |
| 35 | 1149.502 | 1139.738 | 1126.86 | 1121.412 | 1122.049 | 1120.421 | 1121.766 | 1133.157 |
| 40 | 1054.264 | 1043.297 | 1024.971 | 1018.603 | 1016.268 | 1020.089 | 1025.254 | 1034.311 |
| 45 | 947.5644 | 932.7056 | 925.0639 | 923.6488 | 925.5592 | 921.4554 | 923.2951 | 926.5498 |
| 50 | 840.5812 | 825.2273 | 822.0432 | 823.3168 | 821.2649 | 819.1422 | 814.26 | 820.7696 |
| 55 | 729.5651 | 715.697 | 704.8005 | 700.8381 | 699.4938 | 701.4042 | 705.6496 | 711.5931 |
| 60 | 601.6383 | 596.4023 | 587.1333 | 580.4114 | 573.2651 | 572.4868 | 580.836 | 586.8503 |
| 65 | 464.6547 | 461.4706 | 454.0413 | 443.4986 | 437.7674 | 439.8193 | 444.7722 | 452.1308 |
| 70 | 275.5946 | 274.3918 | 271.6323 | 267.3869 | 259.25 | 259.6745 | 257.1273 | 268.9436 |
| 75 | 122.5494 | 105.4264 | 103.8698 | 104.0113 | 103.3745 | 102.8085 | 102.3839 | 102.8085 |
| 80 | 9.19828 | 2.971752 | 2.688728 | 2.688728 | 2.617972 | 2.547216 | 2.547216 | 2.547216 |
| 85 | 0.849072 | 0.70756 | 0.778316 | 0.778316 | 0.778316 | 0.849072 | 0.849072 | 0.849072 |
| 90 | 0.35378 | 0.283024 | 0.35378 | 0.35378 | 0.424536 | 0.35378 | 0.35378 | 0.283024 |

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Data for luminous intensity (6)

Page: 6 Total:10

| Intensity data(cd) | | | | | | | | |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| $\gamma/C(^{\circ})$ | 200.0 | 205.0 | 210.0 | 215.0 | 220.0 | 225.0 | 230.0 | 235.0 |
| 0 | 1396.723 | 1400.686 | 1400.756 | 1389.011 | 1379.105 | 1383.28 | 1388.94 | 1389.719 |
| 5 | 1398.917 | 1389.294 | 1385.402 | 1387.525 | 1393.327 | 1396.016 | 1392.903 | 1390.709 |
| 10 | 1363.893 | 1369.765 | 1370.756 | 1369.553 | 1378.398 | 1377.407 | 1372.242 | 1371.181 |
| 15 | 1340.543 | 1339.27 | 1342.524 | 1341.534 | 1329.364 | 1335.52 | 1341.958 | 1338.279 |
| 20 | 1313.09 | 1314.222 | 1317.052 | 1313.302 | 1307.5 | 1303.326 | 1308.349 | 1313.373 |
| 25 | 1281.533 | 1284.717 | 1277.5 | 1274.103 | 1271.698 | 1276.509 | 1264.41 | 1262.499 |
| 30 | 1222.876 | 1217.852 | 1220.612 | 1220.753 | 1223.442 | 1223.583 | 1218.065 | 1210.423 |
| 35 | 1140.87 | 1144.903 | 1148.37 | 1156.507 | 1154.313 | 1157.144 | 1158.063 | 1155.516 |
| 40 | 1047.26 | 1051.717 | 1064.736 | 1072.944 | 1072.873 | 1073.581 | 1075.137 | 1069.406 |
| 45 | 935.182 | 952.4465 | 963.2722 | 960.0881 | 962.9185 | 968.5789 | 973.6026 | 963.2722 |
| 50 | 830.1094 | 843.7653 | 848.7182 | 851.124 | 847.1616 | 844.4021 | 838.6708 | 830.8877 |
| 55 | 719.73 | 723.4801 | 720.4376 | 719.447 | 715.4139 | 706.6402 | 701.3334 | 695.9561 |
| 60 | 593.9258 | 594.5627 | 592.5815 | 584.8691 | 577.7935 | 569.798 | 567.1801 | 567.4631 |
| 65 | 457.6498 | 455.6686 | 450.2912 | 447.6024 | 443.6401 | 441.8005 | 440.1023 | 437.4136 |
| 70 | 268.9436 | 267.67 | 265.9718 | 281.9626 | 294.1327 | 251.0423 | 248.0705 | 246.3724 |
| 75 | 113.4926 | 116.6059 | 112.0067 | 106.417 | 108.6105 | 96.93571 | 96.08665 | 104.4359 |
| 80 | 5.377456 | 4.95292 | 10.96718 | 13.30213 | 13.16062 | 9.339792 | 5.872748 | 2.47646 |
| 85 | 0.849072 | 0.849072 | 0.849072 | 0.778316 | 0.778316 | 0.778316 | 0.778316 | 0.70756 |
| 90 | 0.35378 | 0.424536 | 0.424536 | 0.35378 | 0.424536 | 0.35378 | 0.35378 | 0.283024 |

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Data for luminous intensity (7)

Intensity data(cd) Page: 7 Total:10

| $\gamma/C(^{\circ})$ | 240.0 | 245.0 | 250.0 | 255.0 | 260.0 | 265.0 | 270.0 | 275.0 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1395.945 | 1389.719 | 1396.723 | 1400.261 | 1391.558 | 1386.959 | 1384.624 | 1390.355 |
| 5 | 1388.233 | 1391.558 | 1390.285 | 1394.459 | 1392.549 | 1386.039 | 1383.563 | 1387.242 |
| 10 | 1374.365 | 1371.322 | 1372.03 | 1369.412 | 1375.355 | 1378.539 | 1382.997 | 1380.308 |
| 15 | 1341.604 | 1346.133 | 1346.77 | 1342.454 | 1350.803 | 1356.817 | 1354.482 | 1350.803 |
| 20 | 1306.085 | 1301.203 | 1309.623 | 1307.854 | 1310.826 | 1308.278 | 1310.967 | 1303.962 |
| 25 | 1262.499 | 1257.9 | 1260.235 | 1264.268 | 1264.339 | 1257.263 | 1253.584 | 1253.584 |
| 30 | 1214.244 | 1207.663 | 1204.833 | 1204.904 | 1200.588 | 1201.083 | 1197.899 | 1194.291 |
| 35 | 1145.681 | 1136.624 | 1132.308 | 1124.667 | 1121.978 | 1125.091 | 1131.247 | 1125.657 |
| 40 | 1060.632 | 1050.727 | 1037.637 | 1031.481 | 1029.712 | 1029.429 | 1020.372 | 1025.537 |
| 45 | 947.6351 | 932.2103 | 930.3707 | 920.8185 | 916.1487 | 906.3136 | 905.7476 | 909.7098 |
| 50 | 824.5197 | 817.2318 | 809.5901 | 805.1325 | 796.7126 | 785.6746 | 790.486 | 790.486 |
| 55 | 699.0693 | 691.6399 | 689.7295 | 686.2625 | 683.6445 | 679.7529 | 678.3378 | 679.3991 |
| 60 | 566.3311 | 567.8169 | 563.9253 | 558.9724 | 555.6469 | 556.4252 | 555.7884 | 553.878 |
| 65 | 421.7765 | 357.7423 | 353.497 | 350.9498 | 348.4733 | 347.412 | 346.9167 | 346.2799 |
| 70 | 245.7356 | 239.0138 | 196.8432 | 190.1214 | 189.343 | 188.8478 | 188.9185 | 187.4326 |
| 75 | 77.97311 | 76.55799 | 73.30322 | 72.38339 | 72.66641 | 72.17112 | 71.95885 | 70.96827 |
| 80 | 2.405704 | 2.547216 | 2.547216 | 2.617972 | 2.688728 | 2.617972 | 2.617972 | 2.617972 |
| 85 | 0.778316 | 0.778316 | 0.778316 | 0.778316 | 0.778316 | 0.778316 | 0.70756 | 0.778316 |
| 90 | 0.283024 | 0.283024 | 0.283024 | 0.35378 | 0.283024 | 0.212268 | 0.283024 | 0.283024 |

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Data for luminous intensity (8)

Intensity data(cd) Page: 8 Total:10

| $\gamma/C(^{\circ})$ | 280.0 | 285.0 | 290.0 | 295.0 | 300.0 | 305.0 | 310.0 | 315.0 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1394.53 | 1401.11 | 1402.101 | 1389.931 | 1395.167 | 1390.78 | 1377.195 | 1383.138 |
| 5 | 1392.124 | 1389.86 | 1388.233 | 1386.535 | 1387.313 | 1389.294 | 1384.836 | 1381.865 |
| 10 | 1372.949 | 1366.864 | 1364.883 | 1372.737 | 1373.232 | 1370.756 | 1377.69 | 1383.563 |
| 15 | 1342.454 | 1334.883 | 1345.355 | 1343.09 | 1338.279 | 1339.906 | 1335.59 | 1331.557 |
| 20 | 1306.722 | 1303.609 | 1307.288 | 1297.382 | 1305.024 | 1300.849 | 1292.924 | 1289.174 |
| 25 | 1258.466 | 1261.792 | 1257.9 | 1250.683 | 1251.957 | 1254.292 | 1257.759 | 1249.834 |
| 30 | 1200.659 | 1201.578 | 1203.135 | 1204.055 | 1202.923 | 1204.904 | 1205.753 | 1211.626 |
| 35 | 1120.775 | 1125.799 | 1127.072 | 1128.7 | 1138.959 | 1142.709 | 1144.62 | 1146.106 |
| 40 | 1025.82 | 1029.783 | 1036.575 | 1036.151 | 1050.727 | 1062.472 | 1065.656 | 1060.703 |
| 45 | 915.4411 | 921.5261 | 923.5073 | 931.7858 | 946.8568 | 953.1541 | 958.4608 | 958.107 |
| 50 | 798.6937 | 803.4343 | 804.5665 | 812.4204 | 825.298 | 825.4395 | 831.1707 | 830.817 |
| 55 | 680.3189 | 684.4935 | 686.1209 | 689.871 | 689.3049 | 690.154 | 691.7814 | 695.673 |
| 60 | 556.7789 | 555.2931 | 557.6281 | 561.5197 | 560.3875 | 558.8309 | 561.3781 | 562.5809 |
| 65 | 346.7044 | 347.8365 | 348.4733 | 359.299 | 418.9463 | 426.588 | 428.7814 | 427.5078 |
| 70 | 186.159 | 184.9562 | 200.3102 | 236.4666 | 234.5561 | 236.4666 | 237.1033 | 258.1179 |
| 75 | 70.04844 | 69.27013 | 70.18996 | 69.76542 | 78.46841 | 95.37909 | 87.73744 | 90.28465 |
| 80 | 2.688728 | 2.617972 | 2.617972 | 2.547216 | 2.547216 | 2.688728 | 7.78316 | 8.419964 |
| 85 | 0.778316 | 0.778316 | 0.778316 | 0.849072 | 0.849072 | 0.849072 | 0.849072 | 0.849072 |
| 90 | 0.283024 | 0.283024 | 0.283024 | 0.35378 | 0.424536 | 0.424536 | 0.424536 | 0.424536 |

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Data for luminous intensity (9)

| Intensity data(cd) | | Page: 9 Total:10 | | | | | | |
|----------------------|----------|------------------|----------|----------|----------|----------|----------|----------|
| $\gamma/C(^{\circ})$ | 320.0 | 325.0 | 330.0 | 335.0 | 340.0 | 345.0 | 350.0 | 355.0 |
| 0 | 1389.011 | 1392.407 | 1394.389 | 1393.964 | 1398.351 | 1397.219 | 1391.558 | 1393.327 |
| 5 | 1388.516 | 1386.818 | 1390.143 | 1391.063 | 1381.44 | 1377.407 | 1385.898 | 1393.327 |
| 10 | 1378.256 | 1362.831 | 1367.855 | 1368.35 | 1365.52 | 1368.067 | 1363.751 | 1369.978 |
| 15 | 1333.68 | 1336.439 | 1331.699 | 1333.326 | 1339.057 | 1338.703 | 1333.68 | 1327.595 |
| 20 | 1295.047 | 1295.047 | 1293.207 | 1297.453 | 1304.033 | 1300.991 | 1298.585 | 1296.533 |
| 25 | 1260.164 | 1258.254 | 1255.99 | 1258.82 | 1252.24 | 1250.4 | 1251.815 | 1254.504 |
| 30 | 1206.39 | 1199.102 | 1202.286 | 1201.225 | 1199.385 | 1188.771 | 1193.441 | 1196.625 |
| 35 | 1146.176 | 1141.436 | 1132.874 | 1132.238 | 1121.553 | 1117.803 | 1113.558 | 1109.666 |
| 40 | 1057.944 | 1058.58 | 1046.481 | 1040.396 | 1033.462 | 1021.504 | 1015.066 | 1012.943 |
| 45 | 953.0833 | 960.725 | 943.9558 | 930.7952 | 927.2574 | 923.2243 | 914.4506 | 915.1581 |
| 50 | 835.4161 | 838.5293 | 830.9584 | 824.2366 | 815.3922 | 812.2789 | 811.642 | 812.0666 |
| 55 | 698.2202 | 704.4467 | 708.1968 | 708.6921 | 701.6873 | 693.4088 | 691.4984 | 691.9229 |
| 60 | 563.9253 | 570.4349 | 574.9633 | 576.1661 | 573.8312 | 568.7367 | 566.5433 | 565.2697 |
| 65 | 427.2247 | 430.9041 | 434.5126 | 436.2815 | 435.9984 | 432.1069 | 430.621 | 428.2153 |
| 70 | 282.8825 | 276.0192 | 259.533 | 251.3961 | 255.1461 | 255.0046 | 252.9527 | 251.1838 |
| 75 | 97.36026 | 94.17624 | 109.2473 | 111.7945 | 107.9737 | 107.1953 | 102.1717 | 97.50176 |
| 80 | 11.95776 | 11.60398 | 11.7455 | 10.89642 | 7.641648 | 9.056767 | 9.481303 | 10.47189 |
| 85 | 0.849072 | 0.919828 | 0.849072 | 0.919828 | 0.919828 | 0.919828 | 0.849072 | 0.849072 |
| 90 | 0.424536 | 0.424536 | 0.424536 | 0.495292 | 0.424536 | 0.424536 | 0.424536 | 0.35378 |

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Data for luminous intensity (10)

Intensity data(cd)

Page: 10 Total:10

| | |
|----------------------|----------|
| $\gamma/C(^{\circ})$ | 360.0 |
| 0 | 1394.813 |
| 5 | 1394.53 |
| 10 | 1377.266 |
| 15 | 1312.382 |
| 20 | 1292.924 |
| 25 | 1261.297 |
| 30 | 1191.46 |
| 35 | 1108.039 |
| 40 | 1012.306 |
| 45 | 917.3515 |
| 50 | 821.4772 |
| 55 | 691.3569 |
| 60 | 561.8027 |
| 65 | 430.5503 |
| 70 | 249.0611 |
| 75 | 96.08665 |
| 80 | 12.66532 |
| 85 | 0.919828 |
| 90 | 0.35378 |

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Equipment list and testing engineer for test

| Item | Equipment No | Equipment | Manufacturer / Type / Series No |
|----------------------------------|--------------|--|---------------------------------|
| 1 | 99A-01 | Magnetic angle locator | Johnson |
| 2 | 99E-06 | Digital power meter | YOKOGAWA WT210 (91JB34563) |
| 3 | 99E-08 | Digital power meter | YOKOGAWA WT210 (91K539455) |
| 4 | 99E-12 | AC Power Source | APC AFC-500W |
| 5 | 99E-17 | AC Power Source | APC AFC-5kW |
| 6 | 99O-01 | Goniophotometer System | Sensing GMS-2000 |
| 7 | 99O-02 | Spectroradiometer (2π) | Sensing SPR-3000 |
| 8 | 99O-23 | Thermostatic Stabilized Photometric Sphere (2π) | Sensing |
| 9 | 104O-30 | Photometric standard lamp 110V/100W | Sensing (S13100250) |
| 10 | 103T-13 | Temperature and humidity records | TANDD(TR-72UI/F80417A2) |
| 11 | 103T-14 | Temperature and humidity records | TANDD(TR-72UI/F8043A00) |
| Testing engineers: JIAN YUN CHEN | | | |

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