



IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZIS-44-LED50.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L101411401R01
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUE DATE] 11/20/2014
 [MANUFAC] PRUDENTIAL LTG.
 [LUMCAT] ZIS-LED50-44-SAL-DM10
 [MORE] DIFFUSED LENS

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 14102 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 101 |
| Total Luminaire Watts | 140 |
| Ballast Factor | 1.00 |
| CIE Type | General Diffuse |
| Spacing Criterion (0-180) | N.A. |
| Spacing Criterion (90-270) | N.A. |
| Spacing Criterion (Diagonal) | N.A. |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 2.02 ft |
| Luminous Width (90-270) | 2.02 ft |
| Luminous Height | 0.13 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 4352 | 4572 | 4355 |
| 55 | 4965 | 5202 | 4941 |
| 65 | 6110 | 6326 | 6148 |
| 75 | 8466 | 8419 | 8684 |
| 85 | 16312 | 11414 | 16986 |

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CANDELA TABULATION

| | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 |
| 5 | 1143.199 | 1142.587 | 1143.539 | 1142.876 | 1142.179 | 1142.621 | 1142.842 | 1142.944 | 1142.825 | 1143.250 |
| 10 | 1180.531 | 1180.089 | 1180.412 | 1180.038 | 1180.752 | 1182.537 | 1183.659 | 1184.526 | 1184.951 | 1185.733 |
| 15 | 1221.416 | 1221.501 | 1222.147 | 1223.354 | 1225.785 | 1229.219 | 1231.990 | 1234.183 | 1235.798 | 1237.124 |
| 20 | 1257.558 | 1256.895 | 1260.669 | 1263.984 | 1268.931 | 1274.167 | 1279.097 | 1283.228 | 1286.645 | 1289.008 |
| 25 | 1282.412 | 1283.585 | 1289.042 | 1295.638 | 1303.237 | 1311.839 | 1318.469 | 1324.181 | 1328.601 | 1331.491 |
| 30 | 1292.408 | 1294.907 | 1303.475 | 1312.825 | 1323.518 | 1334.585 | 1344.241 | 1351.075 | 1356.600 | 1359.898 |
| 35 | 1276.088 | 1279.335 | 1291.473 | 1305.022 | 1321.801 | 1338.053 | 1352.078 | 1361.394 | 1367.565 | 1371.033 |
| 40 | 1258.255 | 1262.675 | 1276.088 | 1291.167 | 1307.691 | 1322.583 | 1336.608 | 1347.352 | 1358.334 | 1363.383 |
| 45 | 1242.802 | 1249.517 | 1264.171 | 1280.355 | 1294.788 | 1306.484 | 1317.245 | 1327.819 | 1334.823 | 1338.410 |
| 50 | 1209.023 | 1217.421 | 1232.024 | 1250.333 | 1269.492 | 1284.350 | 1296.114 | 1305.651 | 1308.303 | 1309.306 |
| 55 | 1179.851 | 1187.671 | 1205.147 | 1223.269 | 1239.759 | 1252.917 | 1264.647 | 1273.436 | 1278.026 | 1279.182 |
| 60 | 1153.637 | 1162.171 | 1180.072 | 1197.650 | 1212.355 | 1225.360 | 1236.087 | 1243.159 | 1246.831 | 1249.296 |
| 65 | 1114.945 | 1123.819 | 1141.550 | 1160.114 | 1176.502 | 1189.915 | 1199.622 | 1205.895 | 1210.026 | 1212.372 |
| 70 | 1076.117 | 1085.331 | 1104.303 | 1121.116 | 1135.056 | 1145.596 | 1153.416 | 1158.924 | 1163.242 | 1166.778 |
| 75 | 1031.135 | 1039.907 | 1056.346 | 1069.725 | 1080.537 | 1088.867 | 1094.851 | 1099.339 | 1103.759 | 1107.567 |
| 80 | 986.510 | 993.718 | 1002.473 | 1007.267 | 1009.239 | 1008.780 | 1007.709 | 1007.250 | 1008.695 | 1012.163 |
| 85 | 936.241 | 929.968 | 906.525 | 878.968 | 850.391 | 822.919 | 799.017 | 781.252 | 771.341 | 770.117 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 95 | 937.159 | 930.699 | 905.760 | 874.752 | 843.795 | 815.643 | 791.792 | 775.693 | 767.754 | 767.958 |
| 100 | 980.186 | 987.785 | 996.778 | 1001.895 | 1004.003 | 1004.360 | 1003.714 | 1004.224 | 1006.485 | 1010.939 |
| 105 | 1019.694 | 1028.908 | 1045.585 | 1059.576 | 1070.864 | 1079.891 | 1087.031 | 1093.202 | 1099.322 | 1104.609 |
| 110 | 1060.375 | 1069.963 | 1089.258 | 1107.176 | 1121.881 | 1133.679 | 1143.080 | 1150.458 | 1156.850 | 1162.222 |
| 115 | 1097.673 | 1106.513 | 1125.094 | 1144.882 | 1162.698 | 1177.250 | 1188.640 | 1196.851 | 1202.903 | 1207.459 |
| 120 | 1136.994 | 1145.800 | 1164.296 | 1183.047 | 1199.282 | 1213.749 | 1226.227 | 1235.135 | 1240.592 | 1244.009 |
| 125 | 1166.064 | 1173.765 | 1191.700 | 1210.859 | 1228.488 | 1242.734 | 1255.603 | 1265.327 | 1271.345 | 1273.640 |
| 130 | 1200.183 | 1206.932 | 1223.456 | 1241.697 | 1260.533 | 1276.717 | 1289.314 | 1298.936 | 1302.047 | 1303.356 |
| 135 | 1236.869 | 1242.377 | 1258.170 | 1274.269 | 1289.127 | 1301.401 | 1311.805 | 1321.427 | 1327.870 | 1330.675 |
| 140 | 1255.331 | 1258.952 | 1271.311 | 1286.254 | 1302.455 | 1317.279 | 1330.250 | 1339.719 | 1349.715 | 1353.319 |
| 145 | 1271.141 | 1274.303 | 1286.339 | 1299.463 | 1315.460 | 1331.066 | 1343.816 | 1351.857 | 1356.838 | 1358.980 |
| 150 | 1284.826 | 1286.764 | 1294.465 | 1303.951 | 1313.998 | 1324.487 | 1332.868 | 1339.056 | 1343.408 | 1345.193 |
| 155 | 1271.277 | 1272.246 | 1277.142 | 1283.364 | 1290.181 | 1297.440 | 1303.407 | 1308.065 | 1311.380 | 1313.182 |
| 160 | 1241.816 | 1240.881 | 1243.635 | 1246.576 | 1250.860 | 1255.909 | 1260.244 | 1263.678 | 1266.211 | 1267.809 |
| 165 | 1200.744 | 1200.642 | 1200.812 | 1202.155 | 1204.348 | 1207.476 | 1209.941 | 1211.607 | 1212.644 | 1213.562 |
| 170 | 1156.714 | 1156.289 | 1156.476 | 1155.592 | 1156.017 | 1157.717 | 1158.754 | 1159.451 | 1159.519 | 1160.216 |
| 175 | 1117.546 | 1116.951 | 1117.801 | 1117.070 | 1116.169 | 1116.186 | 1116.050 | 1115.829 | 1115.438 | 1115.540 |
| 180 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 |

Vert. Angles **Horizontal Angles**

| | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 | 1124.992 |
| 5 | 1143.539 | 1144.321 | 1144.984 | 1145.358 | 1145.307 | 1146.174 | 1146.769 | 1145.885 | 1146.429 |
| 10 | 1185.954 | 1186.600 | 1186.991 | 1187.008 | 1186.345 | 1186.872 | 1187.909 | 1187.586 | 1188.453 |
| 15 | 1238.076 | 1238.688 | 1238.722 | 1237.651 | 1235.985 | 1235.390 | 1235.543 | 1236.002 | 1236.138 |
| 20 | 1290.470 | 1290.521 | 1289.603 | 1287.393 | 1284.095 | 1281.154 | 1280.236 | 1277.890 | 1278.757 |
| 25 | 1333.021 | 1332.545 | 1330.879 | 1327.649 | 1322.464 | 1316.769 | 1311.635 | 1307.963 | 1306.841 |
| 30 | 1360.969 | 1359.575 | 1356.243 | 1350.395 | 1342.014 | 1333.378 | 1324.691 | 1317.976 | 1315.613 |
| 35 | 1371.118 | 1368.194 | 1362.567 | 1353.727 | 1343.561 | 1331.763 | 1320.305 | 1309.544 | 1305.617 |
| 40 | 1362.805 | 1358.402 | 1350.922 | 1339.787 | 1326.799 | 1312.009 | 1297.355 | 1285.353 | 1280.236 |
| 45 | 1339.906 | 1335.520 | 1326.850 | 1314.644 | 1299.140 | 1283.449 | 1267.333 | 1251.608 | 1243.652 |
| 50 | 1308.082 | 1303.645 | 1295.808 | 1284.146 | 1268.285 | 1249.602 | 1230.868 | 1214.038 | 1204.858 |
| 55 | 1276.003 | 1271.073 | 1263.253 | 1252.781 | 1239.691 | 1222.232 | 1203.107 | 1184.373 | 1174.105 |
| 60 | 1248.174 | 1244.400 | 1236.903 | 1226.975 | 1214.905 | 1200.064 | 1181.823 | 1162.987 | 1152.260 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 65 | 1212.049 | 1210.400 | 1206.320 | 1198.432 | 1186.277 | 1170.416 | 1151.189 | 1132.421 | 1121.966 |
| 70 | 1168.138 | 1168.172 | 1166.047 | 1161.049 | 1152.940 | 1140.530 | 1123.547 | 1104.167 | 1093.695 |
| 75 | 1110.525 | 1112.599 | 1113.381 | 1111.698 | 1106.326 | 1097.741 | 1084.464 | 1067.192 | 1057.672 |
| 80 | 1017.127 | 1023.264 | 1030.404 | 1037.323 | 1041.879 | 1042.457 | 1038.938 | 1029.758 | 1022.006 |
| 85 | 778.209 | 794.597 | 818.312 | 847.960 | 880.277 | 913.189 | 944.180 | 969.527 | 974.933 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 95 | 776.883 | 793.186 | 815.813 | 843.013 | 874.089 | 904.774 | 935.595 | 967.028 | 973.777 |
| 100 | 1016.498 | 1022.737 | 1029.588 | 1035.419 | 1039.601 | 1040.145 | 1036.099 | 1027.837 | 1019.371 |
| 105 | 1108.842 | 1111.766 | 1112.888 | 1111.103 | 1105.714 | 1097.231 | 1084.498 | 1068.569 | 1057.400 |
| 110 | 1165.741 | 1167.526 | 1166.676 | 1161.848 | 1153.790 | 1142.111 | 1126.165 | 1108.009 | 1095.208 |
| 115 | 1209.176 | 1208.972 | 1205.334 | 1197.837 | 1186.804 | 1172.201 | 1154.470 | 1136.688 | 1123.615 |
| 120 | 1243.856 | 1241.221 | 1234.948 | 1225.037 | 1213.171 | 1199.452 | 1182.520 | 1164.330 | 1150.611 |
| 125 | 1271.413 | 1267.129 | 1259.802 | 1248.616 | 1236.002 | 1219.631 | 1201.492 | 1182.877 | 1169.294 |
| 130 | 1302.506 | 1297.814 | 1289.467 | 1277.363 | 1262.046 | 1244.128 | 1226.091 | 1208.666 | 1196.392 |
| 135 | 1331.355 | 1326.357 | 1317.415 | 1304.852 | 1289.331 | 1273.980 | 1257.881 | 1240.932 | 1230.137 |
| 140 | 1351.602 | 1346.213 | 1337.577 | 1325.626 | 1312.264 | 1297.508 | 1282.905 | 1269.594 | 1262.012 |
| 145 | 1357.586 | 1353.149 | 1346.213 | 1336.098 | 1325.065 | 1313.148 | 1301.605 | 1288.872 | 1282.684 |
| 150 | 1344.581 | 1341.555 | 1336.914 | 1329.944 | 1320.798 | 1311.516 | 1301.962 | 1292.935 | 1289.042 |
| 155 | 1313.692 | 1311.924 | 1308.966 | 1304.648 | 1298.647 | 1292.425 | 1285.897 | 1280.100 | 1277.533 |
| 160 | 1268.710 | 1267.707 | 1265.905 | 1262.981 | 1259.037 | 1255.280 | 1252.441 | 1248.701 | 1248.871 |
| 165 | 1214.225 | 1214.412 | 1213.664 | 1211.981 | 1209.448 | 1207.646 | 1206.473 | 1205.793 | 1205.385 |
| 170 | 1160.216 | 1160.454 | 1160.165 | 1159.349 | 1157.853 | 1157.462 | 1157.853 | 1157.139 | 1157.768 |
| 175 | 1115.387 | 1115.744 | 1115.982 | 1116.067 | 1115.795 | 1116.203 | 1116.560 | 1115.438 | 1115.965 |
| 180 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 | 1095.191 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|-------|--------|
| 0-20 | 460.75 | N.A. | 3.30 |
| 0-30 | 1068.04 | N.A. | 7.60 |
| 0-40 | 1904.43 | N.A. | 13.50 |
| 0-60 | 4019.76 | N.A. | 28.50 |
| 0-80 | 6333.36 | N.A. | 44.90 |
| 0-90 | 7077.06 | N.A. | 50.20 |
| 10-90 | 6966.64 | N.A. | 49.40 |
| 20-40 | 1443.67 | N.A. | 10.20 |
| 20-50 | 2447.37 | N.A. | 17.40 |
| 40-70 | 3283.17 | N.A. | 23.30 |
| 60-80 | 2313.6 | N.A. | 16.40 |
| 70-80 | 1145.76 | N.A. | 8.10 |
| 80-90 | 743.70 | N.A. | 5.30 |
| 90-110 | 1881.8 | N.A. | 13.30 |
| 90-120 | 3043.53 | N.A. | 21.60 |
| 90-130 | 4148.98 | N.A. | 29.40 |
| 90-150 | 5974.95 | N.A. | 42.40 |
| 90-180 | 7025.01 | N.A. | 49.80 |
| 110-180 | 5143.21 | N.A. | 36.50 |
| 0-180 | 14102.07 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 110.43 |
| 10-20 | 350.32 |
| 20-30 | 607.29 |
| 30-40 | 836.39 |
| 40-50 | 1003.69 |
| 50-60 | 1111.64 |
| 60-70 | 1167.84 |
| 70-80 | 1145.76 |
| 80-90 | 743.70 |
| 90-100 | 740.67 |
| 100-110 | 1141.13 |
| 110-120 | 1161.74 |
| 120-130 | 1105.44 |
| 130-140 | 997.39 |
| 140-150 | 828.58 |
| 150-160 | 598.72 |
| 160-170 | 343.54 |
| 170-180 | 107.80 |

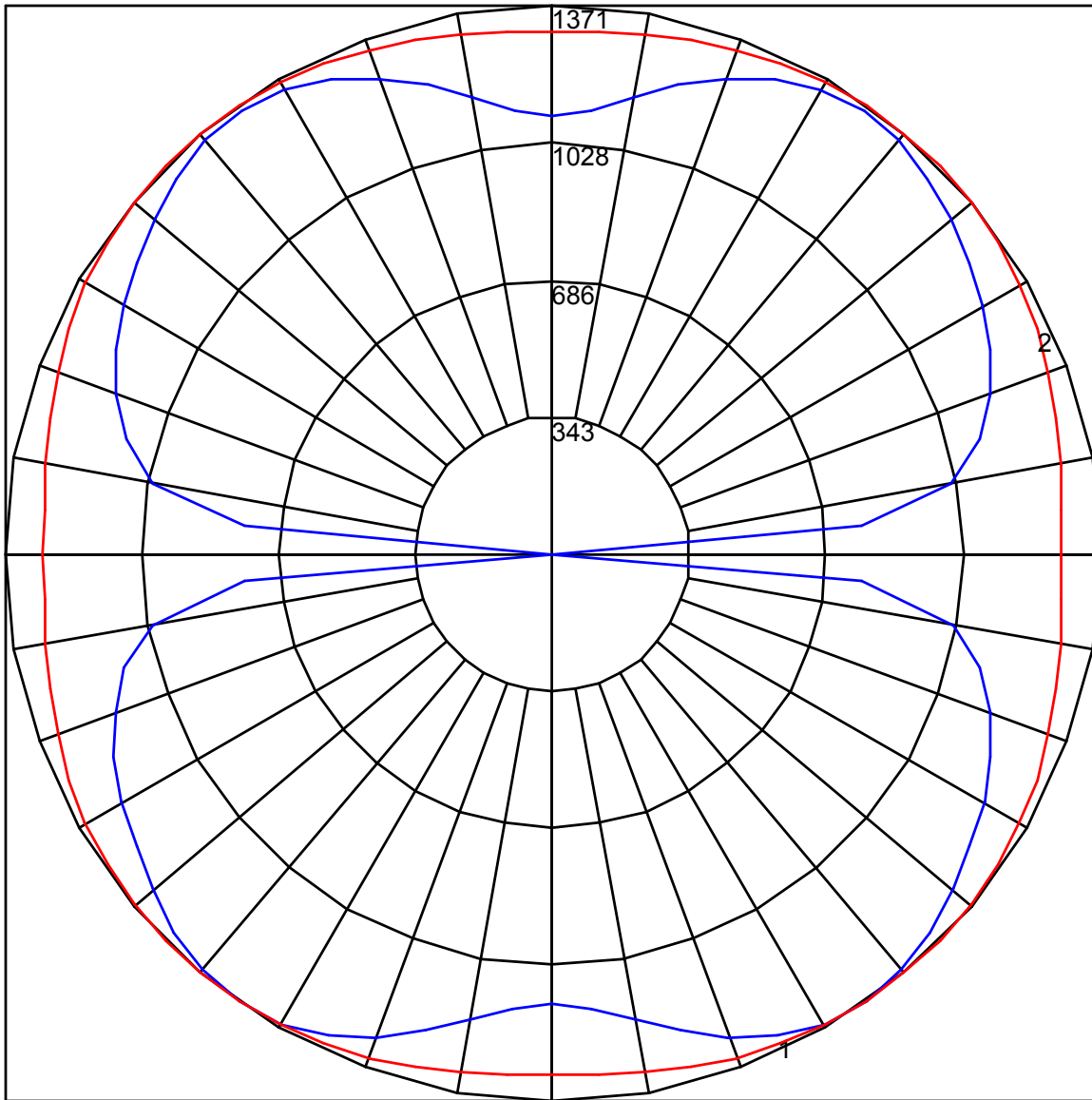
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 83 | 83 | 83 | 69 | 69 | 69 | 56 | 56 | 56 | 50 |
| 1 | 95 | 89 | 84 | 80 | 87 | 82 | 78 | 74 | 69 | 65 | 62 | 56 | 54 | 52 | 45 | 43 | 42 | 36 |
| 2 | 85 | 76 | 69 | 62 | 78 | 70 | 63 | 58 | 58 | 53 | 49 | 48 | 44 | 41 | 38 | 35 | 33 | 28 |
| 3 | 77 | 66 | 57 | 50 | 70 | 60 | 53 | 47 | 50 | 44 | 40 | 41 | 36 | 33 | 32 | 29 | 26 | 22 |
| 4 | 70 | 57 | 48 | 42 | 63 | 53 | 45 | 39 | 44 | 38 | 33 | 36 | 31 | 27 | 28 | 25 | 22 | 18 |
| 5 | 64 | 51 | 42 | 35 | 58 | 47 | 38 | 32 | 39 | 32 | 28 | 32 | 27 | 23 | 25 | 21 | 18 | 15 |
| 6 | 58 | 45 | 36 | 30 | 53 | 41 | 33 | 28 | 35 | 28 | 24 | 28 | 23 | 19 | 22 | 19 | 16 | 12 |
| 7 | 54 | 40 | 32 | 26 | 49 | 37 | 29 | 24 | 31 | 25 | 20 | 25 | 21 | 17 | 20 | 16 | 13 | 11 |
| 8 | 50 | 36 | 28 | 22 | 45 | 34 | 26 | 21 | 28 | 22 | 18 | 23 | 18 | 15 | 18 | 15 | 12 | 9 |
| 9 | 46 | 33 | 25 | 20 | 42 | 31 | 23 | 18 | 26 | 20 | 16 | 21 | 16 | 13 | 17 | 13 | 10 | 8 |
| 10 | 43 | 30 | 23 | 17 | 39 | 28 | 21 | 16 | 24 | 18 | 14 | 19 | 15 | 12 | 16 | 12 | 9 | 7 |

POLAR GRAPH



Maximum Candela = 1371.118 Located At Horizontal Angle = 50, Vertical Angle = 35
1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (35) (Through Max. Cd.)