



IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZDS-PRO-44-LED4-HO.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L101403501
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUE DATE] 10/20/2014
 [MANUFAC] PRUDENTIAL LTG.
 [LUMCAT] ZDS-44-LED4-SO
 [LUMINAIRE] 38"SQ. X 3"H. LED LUMINAIRE
 [MORE] DIFFUSED LENS
 [BALLASTCAT] OSRAM OPTOTRONIC
 [BALLAST] INPUT: 120-277VAC, 0.52-0.24A,
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC,
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

| | |
|---------------------------------|---------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 24484 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 122 |
| Total Luminaire Watts | 200 |
| Ballast Factor | 1.00 |
| CIE Type | Semi-Direct |
| Spacing Criterion (0-180) | 1.18 |
| Spacing Criterion (90-270) | 1.20 |
| Spacing Criterion (Diagonal) | 1.32 |
| Basic Luminous Shape | Rectangular w/Sides |
| Luminous Length (0-180) | 2.17 ft |
| Luminous Width (90-270) | 2.17 ft |
| Luminous Height | 0.10 ft |

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LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 13938 | 13481 | 13885 |
| 55 | 13947 | 13537 | 13607 |
| 65 | 14072 | 14107 | 13399 |
| 75 | 14076 | 14968 | 13046 |
| 85 | 18098 | 18745 | 16337 |

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CANDELA TABULATION

| | <u>0</u> | <u>5</u> | <u>10</u> | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>35</u> | <u>40</u> | <u>45</u> |
|------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 |
| 5 | 7199.1 | 7199.1 | 7199.1 | 7199.1 | 7204.8 | 7204.8 | 7199.1 | 7193.4 | 7193.4 | 7193.4 |
| 10 | 7073.7 | 7068.0 | 7073.7 | 7073.7 | 7079.4 | 7079.4 | 7073.7 | 7073.7 | 7073.7 | 7079.4 |
| 15 | 6834.3 | 6840.0 | 6834.3 | 6834.3 | 6851.4 | 6862.8 | 6862.8 | 6862.8 | 6862.8 | 6862.8 |
| 20 | 6509.4 | 6503.7 | 6503.7 | 6503.7 | 6515.1 | 6526.5 | 6532.2 | 6532.2 | 6532.2 | 6537.9 |
| 25 | 6099.0 | 6099.0 | 6104.7 | 6116.1 | 6127.5 | 6133.2 | 6133.2 | 6138.9 | 6138.9 | 6138.9 |
| 30 | 5682.9 | 5682.9 | 5688.6 | 5700.0 | 5705.7 | 5711.4 | 5705.7 | 5711.4 | 5705.7 | 5705.7 |
| 35 | 5272.5 | 5278.2 | 5289.6 | 5295.3 | 5295.3 | 5289.6 | 5278.2 | 5272.5 | 5266.8 | 5266.8 |
| 40 | 4890.6 | 4896.3 | 4902.0 | 4907.7 | 4902.0 | 4884.9 | 4873.5 | 4862.1 | 4845.0 | 4845.0 |
| 45 | 4514.4 | 4514.4 | 4531.5 | 4531.5 | 4525.8 | 4508.7 | 4485.9 | 4474.5 | 4457.4 | 4446.0 |
| 50 | 4132.5 | 4132.5 | 4149.6 | 4155.3 | 4155.3 | 4138.2 | 4121.1 | 4104.0 | 4086.9 | 4075.5 |
| 55 | 3733.5 | 3739.2 | 3762.0 | 3773.4 | 3773.4 | 3767.7 | 3750.6 | 3739.2 | 3722.1 | 3716.4 |
| 60 | 3340.2 | 3345.9 | 3380.1 | 3397.2 | 3408.6 | 3408.6 | 3408.6 | 3402.9 | 3391.5 | 3380.1 |
| 65 | 2861.4 | 2872.8 | 2907.0 | 2935.5 | 2964.0 | 2981.1 | 2986.8 | 2992.5 | 2986.8 | 2975.4 |
| 70 | 2365.5 | 2376.9 | 2416.8 | 2451.0 | 2485.2 | 2513.7 | 2536.5 | 2553.6 | 2559.3 | 2547.9 |
| 75 | 1869.6 | 1886.7 | 1926.6 | 1966.5 | 2012.1 | 2052.0 | 2080.5 | 2103.3 | 2114.7 | 2109.0 |
| 80 | 1425.0 | 1442.1 | 1482.0 | 1521.9 | 1567.5 | 1613.1 | 1647.3 | 1670.1 | 1687.2 | 1681.5 |
| 85 | 1054.5 | 1065.9 | 1088.7 | 1117.2 | 1151.4 | 1185.6 | 1214.1 | 1236.9 | 1248.3 | 1248.3 |
| 90 | 501.6 | 507.3 | 524.4 | 552.9 | 581.4 | 604.2 | 627.0 | 649.8 | 655.5 | 655.5 |
| 95 | 541.5 | 547.2 | 558.6 | 581.4 | 604.2 | 621.3 | 638.4 | 644.1 | 638.4 | 627.0 |
| 100 | 581.4 | 581.4 | 598.5 | 621.3 | 644.1 | 666.9 | 684.0 | 695.4 | 701.1 | 684.0 |
| 105 | 450.3 | 461.7 | 478.8 | 501.6 | 530.1 | 547.2 | 564.3 | 570.0 | 575.7 | 598.5 |
| 110 | 353.4 | 364.8 | 393.3 | 427.5 | 467.4 | 507.3 | 547.2 | 581.4 | 609.9 | 621.3 |
| 115 | 427.5 | 433.2 | 456.0 | 484.5 | 507.3 | 535.8 | 552.9 | 570.0 | 581.4 | 587.1 |
| 120 | 410.4 | 416.1 | 433.2 | 450.3 | 467.4 | 484.5 | 501.6 | 518.7 | 530.1 | 530.1 |
| 125 | 370.5 | 376.2 | 387.6 | 404.7 | 421.8 | 444.6 | 461.7 | 473.1 | 478.8 | 484.5 |
| 130 | 342.0 | 347.7 | 359.1 | 376.2 | 393.3 | 410.4 | 421.8 | 433.2 | 438.9 | 444.6 |
| 135 | 324.9 | 330.6 | 342.0 | 353.4 | 364.8 | 376.2 | 393.3 | 404.7 | 410.4 | 404.7 |
| 140 | 296.4 | 302.1 | 307.8 | 324.9 | 336.3 | 347.7 | 353.4 | 359.1 | 364.8 | 370.5 |
| 145 | 273.6 | 279.3 | 285.0 | 290.7 | 296.4 | 307.8 | 313.5 | 313.5 | 319.2 | 319.2 |
| 150 | 239.4 | 239.4 | 245.1 | 256.5 | 262.2 | 267.9 | 273.6 | 273.6 | 273.6 | 273.6 |
| 155 | 210.9 | 216.6 | 216.6 | 222.3 | 228.0 | 233.7 | 233.7 | 233.7 | 239.4 | 239.4 |
| 160 | 188.1 | 188.1 | 188.1 | 193.8 | 193.8 | 199.5 | 205.2 | 205.2 | 210.9 | 210.9 |
| 165 | 165.3 | 165.3 | 165.3 | 165.3 | 171.0 | 171.0 | 171.0 | 171.0 | 171.0 | 171.0 |
| 170 | 136.8 | 136.8 | 142.5 | 142.5 | 142.5 | 142.5 | 136.8 | 136.8 | 136.8 | 136.8 |
| 175 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 114.0 | 114.0 | 114.0 | 114.0 |
| 180 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Vert.
Angles**

Horizontal Angles

| | <u>50</u> | <u>55</u> | <u>60</u> | <u>65</u> | <u>70</u> | <u>75</u> | <u>80</u> | <u>85</u> | <u>90</u> |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 | 7233.3 |
| 5 | 7193.4 | 7199.1 | 7204.8 | 7210.5 | 7210.5 | 7204.8 | 7204.8 | 7204.8 | 7204.8 |
| 10 | 7073.7 | 7079.4 | 7079.4 | 7085.1 | 7085.1 | 7085.1 | 7085.1 | 7079.4 | 7079.4 |
| 15 | 6862.8 | 6862.8 | 6868.5 | 6868.5 | 6857.1 | 6851.4 | 6845.7 | 6845.7 | 6845.7 |
| 20 | 6537.9 | 6537.9 | 6543.6 | 6537.9 | 6526.5 | 6515.1 | 6520.8 | 6526.5 | 6532.2 |
| 25 | 6144.6 | 6150.3 | 6150.3 | 6144.6 | 6144.6 | 6133.2 | 6133.2 | 6127.5 | 6127.5 |
| 30 | 5711.4 | 5722.8 | 5722.8 | 5728.5 | 5734.2 | 5722.8 | 5711.4 | 5705.7 | 5711.4 |
| 35 | 5272.5 | 5283.9 | 5289.6 | 5306.7 | 5312.4 | 5312.4 | 5306.7 | 5301.0 | 5301.0 |
| 40 | 4850.7 | 4856.4 | 4873.5 | 4890.6 | 4902.0 | 4913.4 | 4907.7 | 4902.0 | 4902.0 |
| 45 | 4451.7 | 4463.1 | 4480.2 | 4491.6 | 4508.7 | 4514.4 | 4508.7 | 4497.3 | 4497.3 |
| 50 | 4075.5 | 4081.2 | 4092.6 | 4104.0 | 4109.7 | 4109.7 | 4098.3 | 4081.2 | 4075.5 |
| 55 | 3710.7 | 3705.0 | 3705.0 | 3705.0 | 3705.0 | 3693.6 | 3676.5 | 3648.0 | 3642.3 |
| 60 | 3368.7 | 3357.3 | 3345.9 | 3334.5 | 3317.4 | 3294.6 | 3266.1 | 3231.9 | 3226.2 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 65 | 2964.0 | 2941.2 | 2918.4 | 2889.9 | 2855.7 | 2815.8 | 2775.9 | 2736.0 | 2724.6 |
| 70 | 2530.8 | 2502.3 | 2462.4 | 2422.5 | 2376.9 | 2325.6 | 2280.0 | 2234.4 | 2217.3 |
| 75 | 2091.9 | 2057.7 | 2012.1 | 1960.8 | 1903.8 | 1846.8 | 1795.5 | 1749.9 | 1732.8 |
| 80 | 1664.4 | 1630.2 | 1584.6 | 1533.3 | 1476.3 | 1419.3 | 1362.3 | 1322.4 | 1305.3 |
| 85 | 1231.2 | 1202.7 | 1168.5 | 1122.9 | 1077.3 | 1031.7 | 991.8 | 963.3 | 951.9 |
| 90 | 649.8 | 632.7 | 609.9 | 575.7 | 547.2 | 513.0 | 484.5 | 467.4 | 461.7 |
| 95 | 604.2 | 575.7 | 541.5 | 513.0 | 484.5 | 456.0 | 427.5 | 410.4 | 404.7 |
| 100 | 661.2 | 632.7 | 609.9 | 598.5 | 587.1 | 564.3 | 547.2 | 530.1 | 524.4 |
| 105 | 615.6 | 632.7 | 621.3 | 604.2 | 575.7 | 547.2 | 518.7 | 501.6 | 495.9 |
| 110 | 621.3 | 621.3 | 609.9 | 587.1 | 558.6 | 530.1 | 501.6 | 478.8 | 473.1 |
| 115 | 587.1 | 581.4 | 570.0 | 552.9 | 530.1 | 501.6 | 478.8 | 461.7 | 456.0 |
| 120 | 530.1 | 524.4 | 507.3 | 495.9 | 478.8 | 456.0 | 438.9 | 421.8 | 416.1 |
| 125 | 484.5 | 478.8 | 467.4 | 450.3 | 433.2 | 410.4 | 393.3 | 376.2 | 370.5 |
| 130 | 444.6 | 438.9 | 427.5 | 416.1 | 393.3 | 376.2 | 359.1 | 347.7 | 336.3 |
| 135 | 410.4 | 404.7 | 393.3 | 381.9 | 364.8 | 347.7 | 336.3 | 324.9 | 319.2 |
| 140 | 364.8 | 359.1 | 353.4 | 347.7 | 336.3 | 319.2 | 307.8 | 296.4 | 290.7 |
| 145 | 319.2 | 313.5 | 313.5 | 302.1 | 296.4 | 290.7 | 279.3 | 273.6 | 267.9 |
| 150 | 273.6 | 273.6 | 267.9 | 262.2 | 262.2 | 250.8 | 245.1 | 239.4 | 239.4 |
| 155 | 239.4 | 233.7 | 233.7 | 228.0 | 228.0 | 222.3 | 216.6 | 210.9 | 210.9 |
| 160 | 210.9 | 205.2 | 205.2 | 199.5 | 193.8 | 193.8 | 188.1 | 188.1 | 182.4 |
| 165 | 171.0 | 171.0 | 171.0 | 171.0 | 165.3 | 165.3 | 165.3 | 165.3 | 159.6 |
| 170 | 136.8 | 136.8 | 136.8 | 136.8 | 136.8 | 136.8 | 136.8 | 136.8 | 136.8 |
| 175 | 114.0 | 114.0 | 114.0 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 |
| 180 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|-------|--------|
| 0-20 | 2612.48 | N.A. | 10.70 |
| 0-30 | 5438.51 | N.A. | 22.20 |
| 0-40 | 8755.46 | N.A. | 35.80 |
| 0-60 | 15567.94 | N.A. | 63.60 |
| 0-80 | 20532.25 | N.A. | 83.90 |
| 0-90 | 21723.67 | N.A. | 88.70 |
| 10-90 | 21040.3 | N.A. | 85.90 |
| 20-40 | 6142.98 | N.A. | 25.10 |
| 20-50 | 9618.00 | N.A. | 39.30 |
| 40-70 | 9686.09 | N.A. | 39.60 |
| 60-80 | 4964.32 | N.A. | 20.30 |
| 70-80 | 2090.71 | N.A. | 8.50 |
| 80-90 | 1191.41 | N.A. | 4.90 |
| 90-110 | 1221.38 | N.A. | 5.00 |
| 90-120 | 1729.89 | N.A. | 7.10 |
| 90-130 | 2121.21 | N.A. | 8.70 |
| 90-150 | 2595.52 | N.A. | 10.60 |
| 90-180 | 2760.66 | N.A. | 11.30 |
| 110-180 | 1539.28 | N.A. | 6.30 |
| 0-180 | 24484.33 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 683.37 |
| 10-20 | 1929.11 |
| 20-30 | 2826.03 |
| 30-40 | 3316.95 |
| 40-50 | 3475.02 |
| 50-60 | 3337.46 |
| 60-70 | 2873.61 |
| 70-80 | 2090.71 |
| 80-90 | 1191.41 |
| 90-100 | 626.91 |
| 100-110 | 594.47 |
| 110-120 | 508.51 |
| 120-130 | 391.33 |
| 130-140 | 286.05 |
| 140-150 | 188.26 |
| 150-160 | 106.22 |
| 160-170 | 48.37 |
| 170-180 | 10.55 |

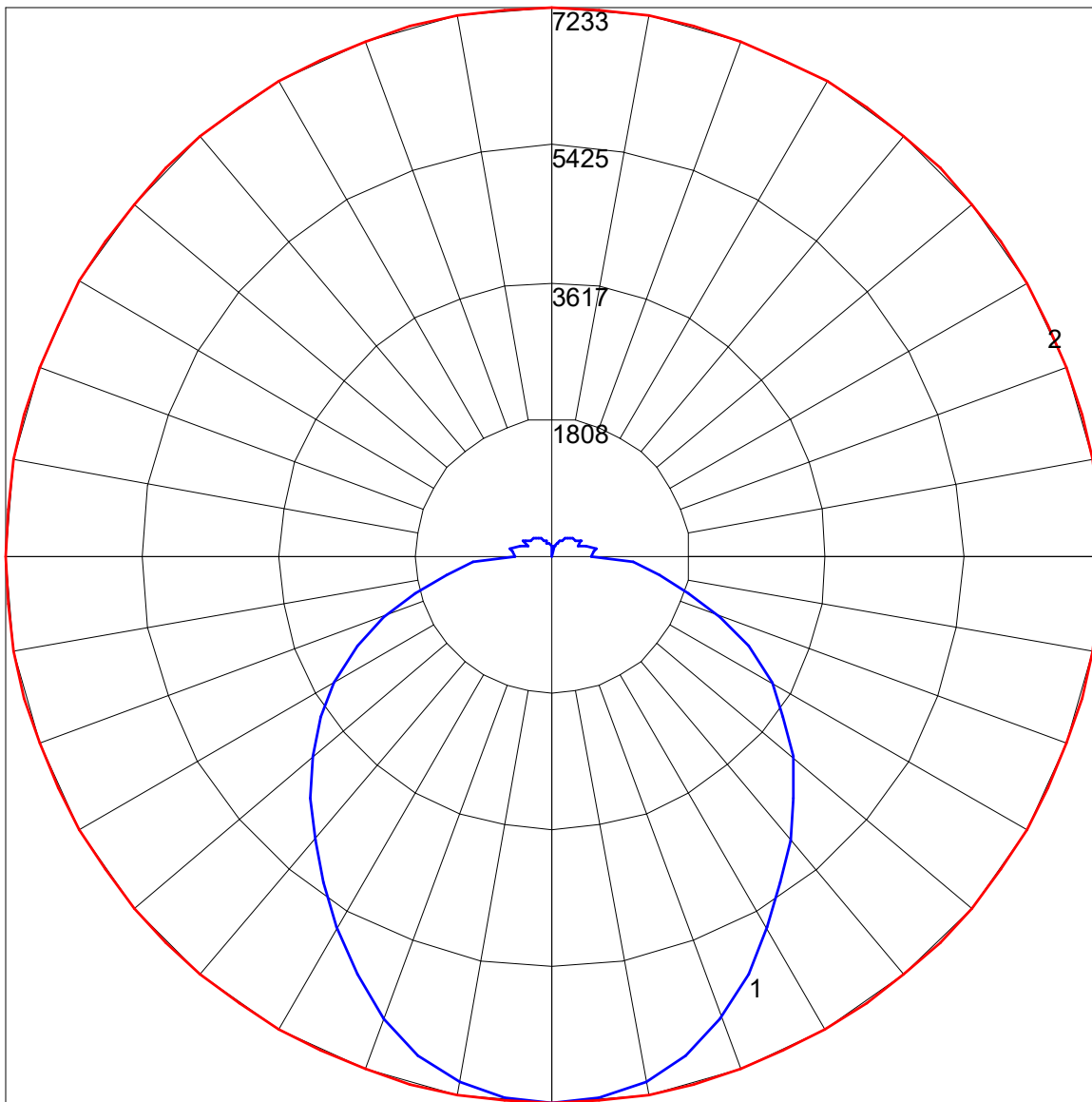
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 |
| 1 | 104 | 99 | 94 | 90 | 101 | 96 | 91 | 87 | 89 | 86 | 82 | 83 | 81 | 78 | 78 | 76 | 74 | 71 |
| 2 | 94 | 85 | 78 | 72 | 91 | 83 | 76 | 70 | 77 | 72 | 67 | 72 | 68 | 64 | 67 | 64 | 60 | 58 |
| 3 | 86 | 75 | 66 | 59 | 82 | 72 | 64 | 58 | 67 | 61 | 55 | 63 | 58 | 53 | 59 | 55 | 51 | 48 |
| 4 | 78 | 66 | 57 | 50 | 75 | 64 | 55 | 49 | 60 | 53 | 47 | 56 | 50 | 45 | 53 | 47 | 43 | 41 |
| 5 | 72 | 59 | 49 | 43 | 69 | 57 | 48 | 42 | 53 | 46 | 40 | 50 | 44 | 39 | 47 | 42 | 37 | 35 |
| 6 | 66 | 53 | 44 | 37 | 64 | 51 | 43 | 36 | 48 | 41 | 35 | 45 | 39 | 34 | 43 | 37 | 33 | 30 |
| 7 | 61 | 48 | 39 | 33 | 59 | 46 | 38 | 32 | 44 | 36 | 31 | 41 | 35 | 30 | 39 | 33 | 29 | 27 |
| 8 | 57 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 40 | 33 | 28 | 38 | 32 | 27 | 36 | 30 | 26 | 24 |
| 9 | 53 | 40 | 32 | 26 | 51 | 39 | 31 | 26 | 37 | 30 | 25 | 35 | 29 | 24 | 33 | 28 | 23 | 22 |
| 10 | 50 | 37 | 29 | 24 | 48 | 36 | 28 | 23 | 34 | 27 | 23 | 32 | 26 | 22 | 31 | 25 | 21 | 20 |

POLAR GRAPH



Maximum Candela = 7233.3 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.)