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Address:380JinOU Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-2264-M
Luminaire: 92.70.131.00
Report No: 200921-B038
Test No: 200921-C038
LampCAT: SEOUL SAWx15 LES14.5
Lamp flux(lm): 2329.0
Number of Lamps: 1
Length(feet)(ft.):0.000
Phm Type: C

Voltage(V): 230.7000
Current(A): 0.0900
Power (W): 19.9900
PF: 0.9540
Ballast type: AC
Width(feet)(ft.):0.000
Height(feet)(ft.):0.000

## Photometric Results

Lumens(lm): 2241.71
Efficiency(%): 96.25%
Lumens(lm)/Power(W): 112.14
Central intensity(cd): 4676.181
Maximum intensity(cd): 4676.181
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=38.3
[C90/270]Total=38.3
Field angle(10%Imax): [C0/180]Total=69.4
[C90/270]Total=69.4
Maximum s/h(1/2): C0_180=0.64 C90_270=0.64
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.30%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.730%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 4676.181 | 1.119 | 1.119 | .048% | .050% |
| 1.0 | 4675.543 | 8.948 | 10.067 | .384% | .449% |
| 2.0 | 4671.483 | 17.878 | 27.945 | .768% | 1.247% |
| 3.0 | 4661.448 | 26.753 | 54.698 | 1.149% | 2.440% |
| 4.0 | 4646.483 | 35.544 | 90.242 | 1.526% | 4.026% |
| 5.0 | 4620.903 | 44.165 | 134.406 | 1.896% | 5.996% |
| 6.0 | 4580.880 | 52.509 | 186.916 | 2.255% | 8.338% |
| 7.0 | 4527.516 | 60.507 | 247.423 | 2.598% | 11.037% |
| 8.0 | 4459.651 | 68.063 | 315.485 | 2.922% | 14.073% |
| 9.0 | 4369.919 | 74.965 | 390.45 | 3.219% | 17.417% |
| 10.0 | 4248.980 | 80.911 | 471.361 | 3.474% | 21.027% |
| 11.0 | 4109.132 | 85.981 | 557.342 | 3.692% | 24.862% |
| 12.0 | 3941.384 | 89.863 | 647.204 | 3.859% | 28.871% |
| 13.0 | 3752.116 | 92.558 | 739.763 | 3.974% | 33.000% |
| 14.0 | 3545.854 | 94.069 | 833.832 | 4.039% | 37.196% |
| 15.0 | 3334.312 | 94.636 | 928.467 | 4.063% | 41.418% |
| 16.0 | 3067.261 | 92.713 | 1021.18 | 3.981% | 45.554% |
| 17.0 | 2857.518 | 91.617 | 1112.797 | 3.934% | 49.641% |
| 18.0 | 2615.466 | 88.631 | 1201.428 | 3.806% | 53.594% |
| 19.0 | 2377.939 | 84.897 | 1286.325 | 3.645% | 57.381% |
| 20.0 | 2140.586 | 80.285 | 1366.611 | 3.447% | 60.963% |
| 21.0 | 1918.488 | 75.395 | 1442.005 | 3.237% | 64.326% |
| 22.0 | 1714.604 | 70.435 | 1512.441 | 3.024% | 67.468% |
| 23.0 | 1537.691 | 65.887 | 1578.327 | 2.829% | 70.407% |
| 24.0 | 1389.606 | 61.981 | 1640.308 | 2.661% | 73.172% |
| 25.0 | 1267.159 | 58.726 | 1699.034 | 2.522% | 75.792% |
| 26.0 | 1157.630 | 55.650 | 1754.684 | 2.389% | 78.274% |
| 27.0 | 1064.980 | 53.020 | 1807.704 | 2.277% | 80.639% |
| 28.0 | 998.385 | 51.400 | 1859.104 | 2.207% | 82.932% |
| 29.0 | 933.339 | 49.621 | 1908.724 | 2.131% | 85.146% |
| 30.0 | 867.801 | 47.582 | 1956.306 | 2.043% | 87.268% |
| 31.0 | 787.813 | 44.495 | 2000.801 | 1.911% | 89.253% |
| 32.0 | 712.239 | 41.389 | 2042.191 | 1.777% | 91.100% |
| 33.0 | 614.322 | 36.691 | 2078.881 | 1.575% | 92.736% |
| 34.0 | 526.336 | 32.276 | 2111.157 | 1.386% | 94.176% |
| 35.0 | 444.486 | 27.958 | 2139.115 | 1.200% | 95.423% |
| 36.0 | 363.211 | 23.411 | 2162.526 | 1.005% | 96.468% |
| 37.0 | 284.511 | 18.776 | 2181.303 | .806% | 97.305% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 214.325 | 14.470 | 2195.773 | .621% | 97.951% |
| 39.0 | 171.437 | 11.831 | 2207.604 | .508% | 98.478% |
| 40.0 | 101.937 | 7.185 | 2214.789 | .309% | 98.799% |
| 41.0 | 52.529 | 3.779 | 2218.568 | .162% | 98.968% |
| 42.0 | 32.024 | 2.350 | 2220.918 | .101% | 99.072% |
| 43.0 | 25.760 | 1.927 | 2222.845 | .083% | 99.158% |
| 44.0 | 21.827 | 1.663 | 2224.508 | .071% | 99.233% |
| 45.0 | 17.917 | 1.389 | 2225.897 | .060% | 99.294% |
| 46.0 | 15.661 | 1.235 | 2227.132 | .053% | 99.350% |
| 47.0 | 13.614 | 1.092 | 2228.224 | .047% | 99.398% |
| 48.0 | 12.105 | 0.987 | 2229.211 | .042% | 99.442% |
| 49.0 | 10.795 | 0.893 | 2230.104 | .038% | 99.482% |
| 50.0 | 9.797 | 0.823 | 2230.927 | .035% | 99.519% |
| 51.0 | 8.869 | 0.756 | 2231.683 | .032% | 99.553% |
| 52.0 | 8.080 | 0.698 | 2232.381 | .030% | 99.584% |
| 53.0 | 7.523 | 0.659 | 2233.04 | .028% | 99.613% |
| 54.0 | 6.902 | 0.612 | 2233.652 | .026% | 99.640% |
| 55.0 | 6.433 | 0.578 | 2234.23 | .025% | 99.666% |
| 56.0 | 5.998 | 0.545 | 2234.775 | .023% | 99.691% |
| 57.0 | 5.632 | 0.518 | 2235.293 | .022% | 99.714% |
| 58.0 | 5.278 | 0.491 | 2235.784 | .021% | 99.736% |
| 59.0 | 4.988 | 0.469 | 2236.253 | .020% | 99.756% |
| 60.0 | 4.698 | 0.446 | 2236.699 | .019% | 99.776% |
| 61.0 | 4.408 | 0.423 | 2237.122 | .018% | 99.795% |
| 62.0 | 4.130 | 0.400 | 2237.522 | .017% | 99.813% |
| 63.0 | 3.776 | 0.369 | 2237.891 | .016% | 99.830% |
| 64.0 | 3.503 | 0.345 | 2238.236 | .015% | 99.845% |
| 65.0 | 3.283 | 0.326 | 2238.563 | .014% | 99.859% |
| 66.0 | 2.952 | 0.296 | 2238.858 | .013% | 99.873% |
| 67.0 | 2.715 | 0.274 | 2239.132 | .012% | 99.885% |
| 68.0 | 2.459 | 0.250 | 2239.382 | .011% | 99.896% |
| 69.0 | 2.227 | 0.228 | 2239.61 | .010% | 99.906% |
| 70.0 | 2.053 | 0.212 | 2239.822 | .009% | 99.916% |
| 71.0 | 1.897 | 0.197 | 2240.019 | .008% | 99.924% |
| 72.0 | 1.746 | 0.182 | 2240.201 | .008% | 99.933% |
| 73.0 | 1.531 | 0.161 | 2240.361 | .007% | 99.940% |
| 74.0 | 1.357 | 0.143 | 2240.504 | .006% | 99.946% |
| 75.0 | 1.143 | 0.121 | 2240.626 | .005% | 99.952% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 0.986 | 0.105 | 2240.73 | .005% | 99.956% |
| 77.0 | 0.916 | 0.098 | 2240.828 | .004% | 99.961% |
| 78.0 | 0.853 | 0.091 | 2240.92 | .004% | 99.965% |
| 79.0 | 0.806 | 0.087 | 2241.007 | .004% | 99.969% |
| 80.0 | 0.771 | 0.083 | 2241.09 | .004% | 99.972% |
| 81.0 | 0.725 | 0.079 | 2241.168 | .003% | 99.976% |
| 82.0 | 0.684 | 0.074 | 2241.243 | .003% | 99.979% |
| 83.0 | 0.644 | 0.070 | 2241.313 | .003% | 99.982% |
| 84.0 | 0.621 | 0.068 | 2241.381 | .003% | 99.985% |
| 85.0 | 0.597 | 0.065 | 2241.446 | .003% | 99.988% |
| 86.0 | 0.586 | 0.064 | 2241.51 | .003% | 99.991% |
| 87.0 | 0.557 | 0.061 | 2241.571 | .003% | 99.994% |
| 88.0 | 0.522 | 0.057 | 2241.628 | .002% | 99.996% |
| 89.0 | 0.505 | 0.055 | 2241.683 | .002% | 99.999% |
| 90.0 | 0.528 | 0.029 | 2241.712 | .001% | 100.000% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

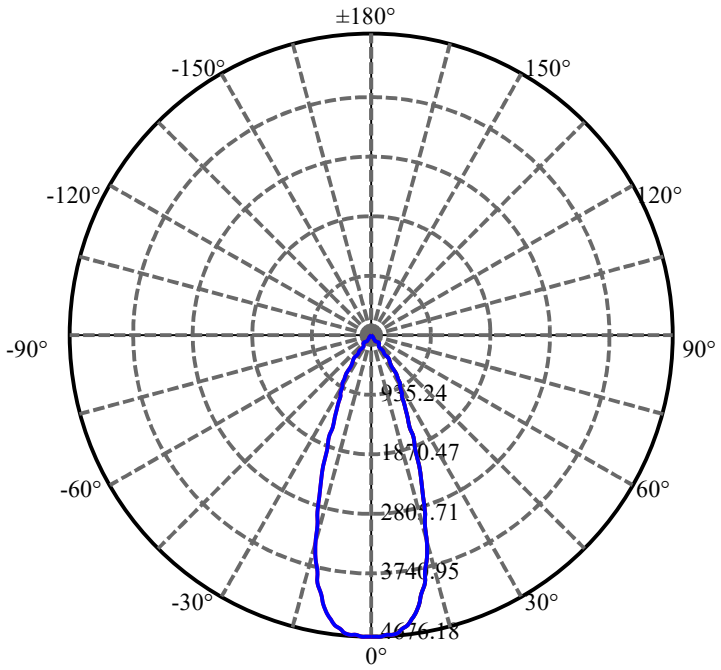
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1956.31 | 84.00% | 87.27% |
| 0-40 | 2214.79 | 95.10% | 98.80% |
| 0-60 | 2236.70 | 96.04% | 99.78% |
| 0-90 | 2241.68 | 96.25% | 100.00% |
| 0-120 | 2241.68 | 96.25% | 100.00% |
| 0-180 | 2241.71 | 96.25% | 100.00% |
| 60-90 | 5.43 | 0.23% | 0.24% |
| 90-120 | 0.00 | 0.00% | 0.00% |
| 90-130 | 0.00 | 0.00% | 0.00% |
| 90-150 | 0.00 | 0.00% | 0.00% |
| 90-180 | 0.00 | 0.00% | 0.00% |
| 0-26.73 | 1793.37 | 77.00% | 80.00% |

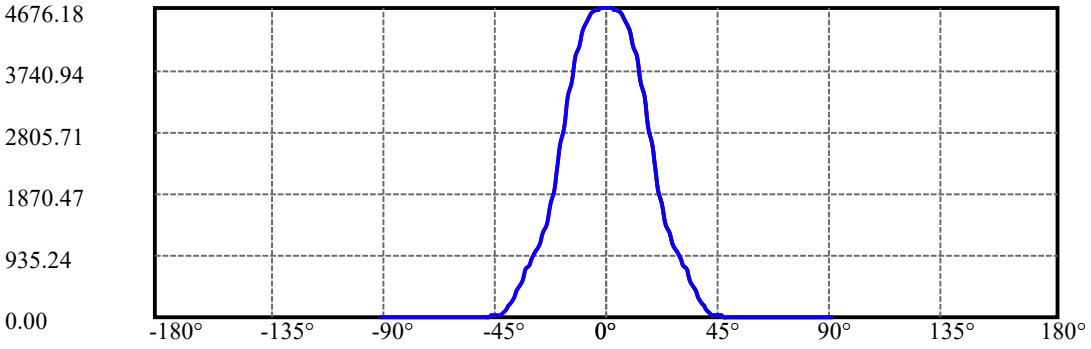
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 471.36 |
| 10-20 | 895.25 |
| 20-30 | 589.70 |
| 30-40 | 258.48 |
| 40-50 | 16.14 |
| 50-60 | 5.77 |
| 60-70 | 3.12 |
| 70-80 | 1.27 |
| 80-90 | 0.59 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

Light Distribution Curve [Unit:cd]






C0(Max):

C0/C180:

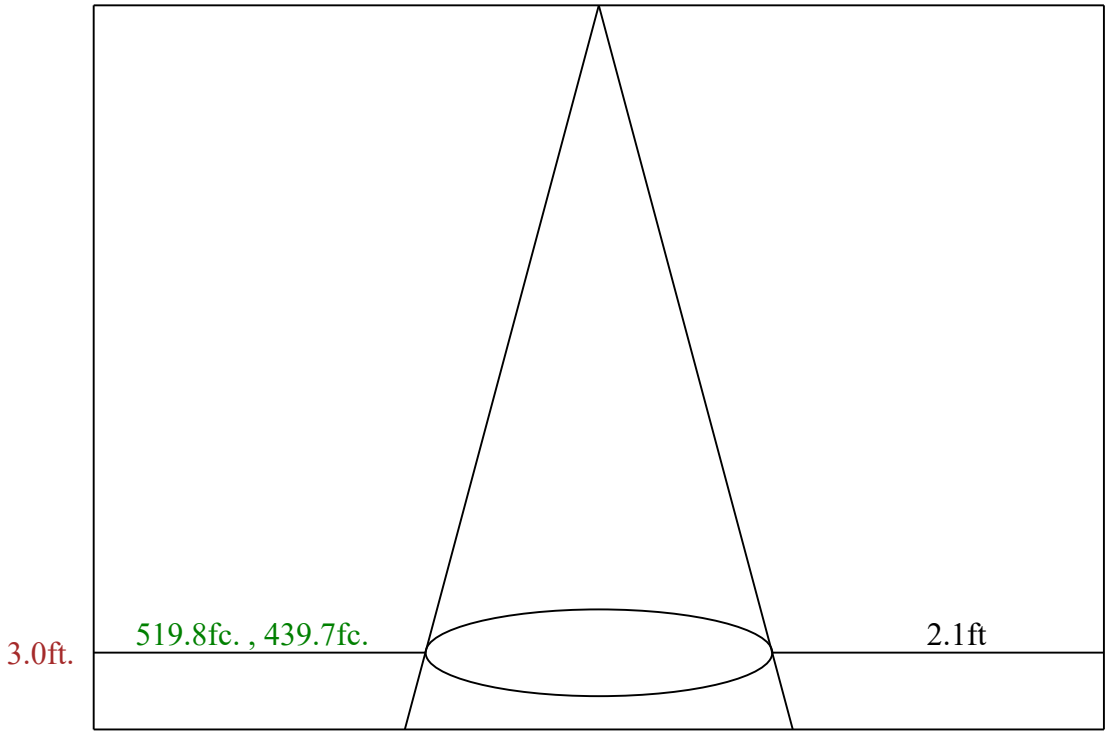
C90/C270:

Field angle(10%Imax):C0/180Left:34.7 Right:34.7
:C90/270Left:34.7 Right:34.7

Beam Angle(50%Imax):C0/180Left:19.2 Right:19.2
:C90/270Left:19.2 Right:19.2

Lux distance Curve



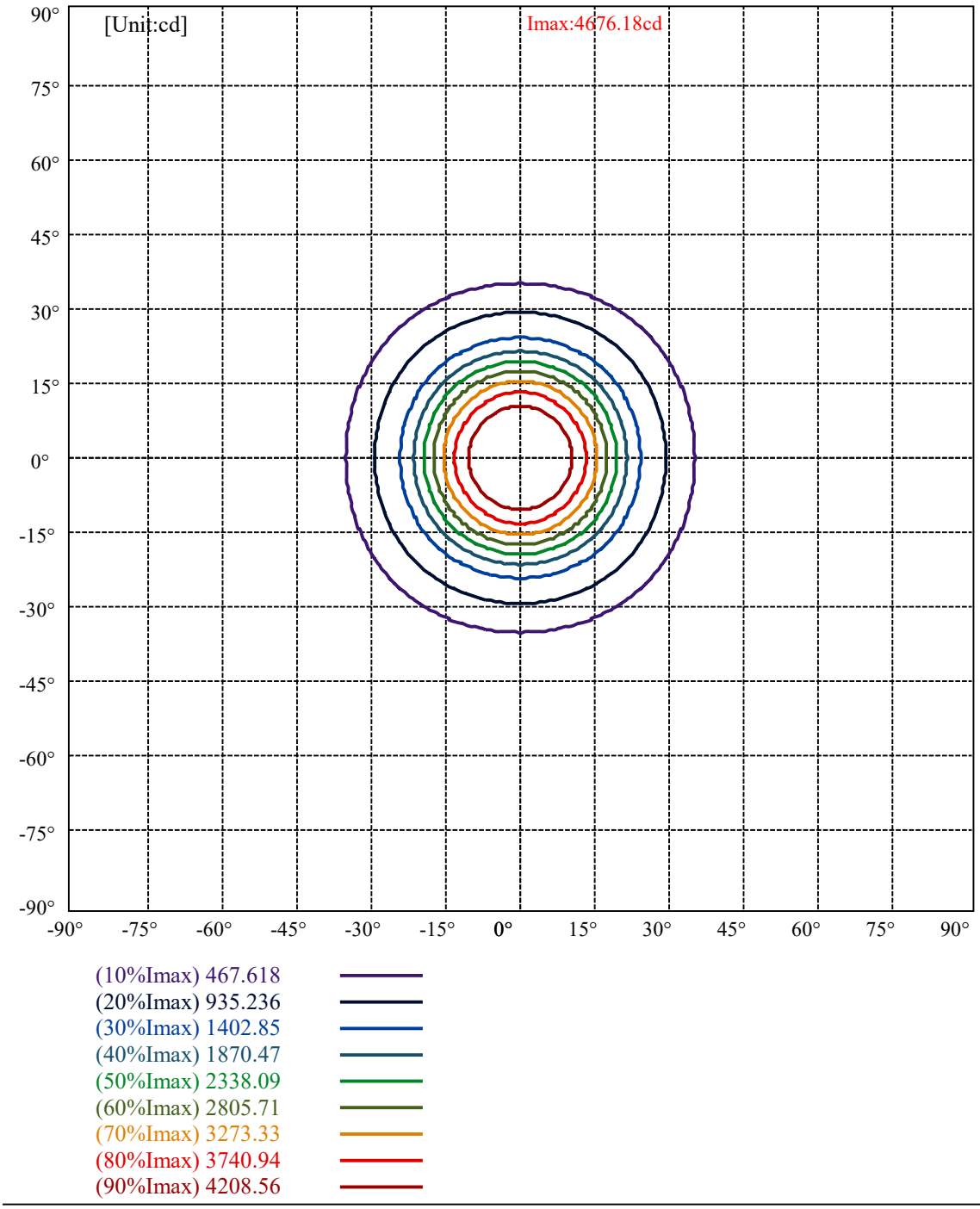



Max , Ave

Beam angle of C0 plane 38.34

ISO-Intensity(V-H)






(10%Imax) 467.618
(20%Imax) 935.236
(30%Imax) 1402.85
(40%Imax) 1870.47
(50%Imax) 2338.09
(60%Imax) 2805.71
(70%Imax) 3273.33
(80%Imax) 3740.94
(90%Imax) 4208.56

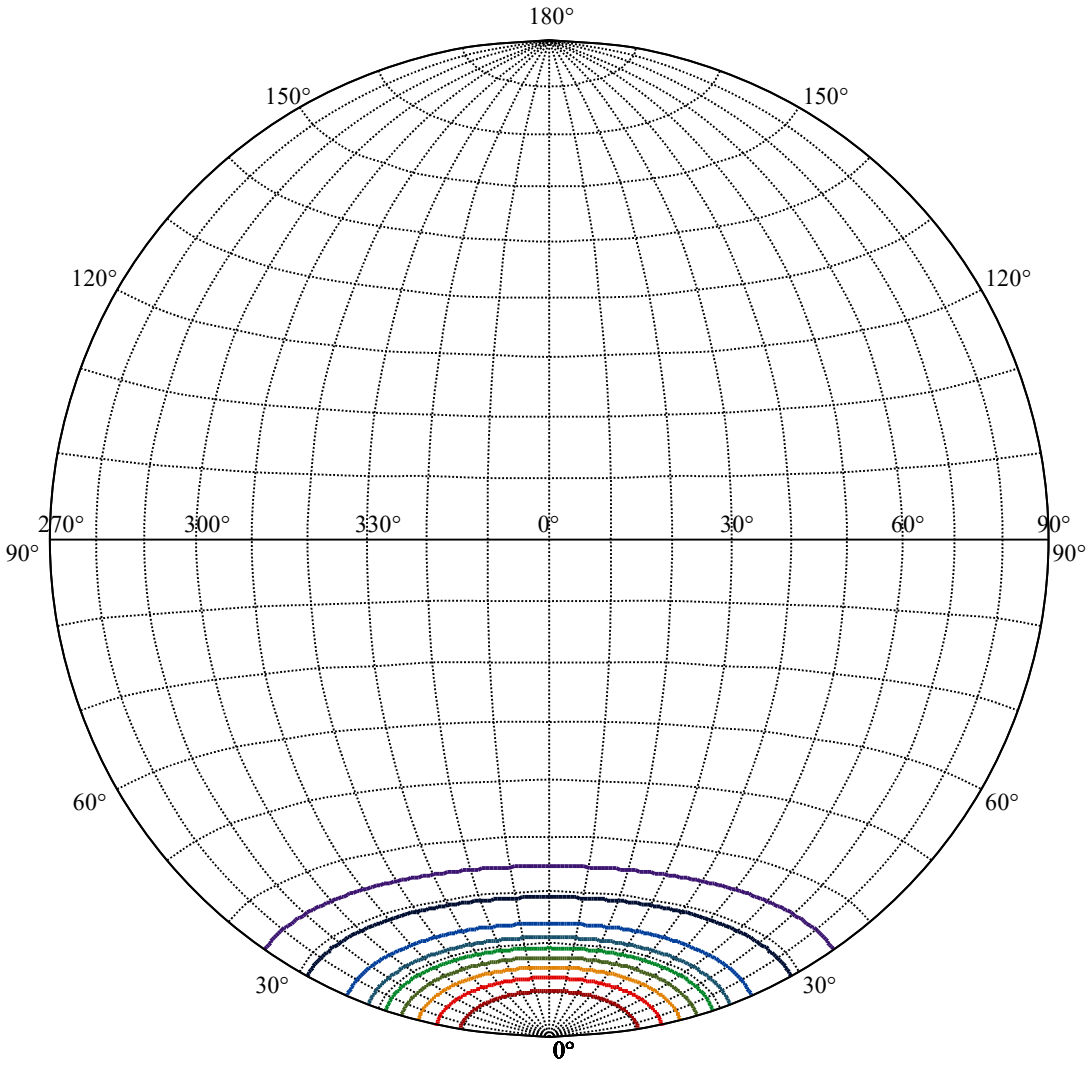
Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

ISO candela diagram on circular web






House [Unit:cd] Road

Imax:4676.18

(10%Imax) 467.618
(20%Imax) 935.236
(30%Imax) 1402.85
(40%Imax) 1870.47
(50%Imax) 2338.09
(60%Imax) 2805.71
(70%Imax) 3273.33
(80%Imax) 3740.94
(90%Imax) 4208.56

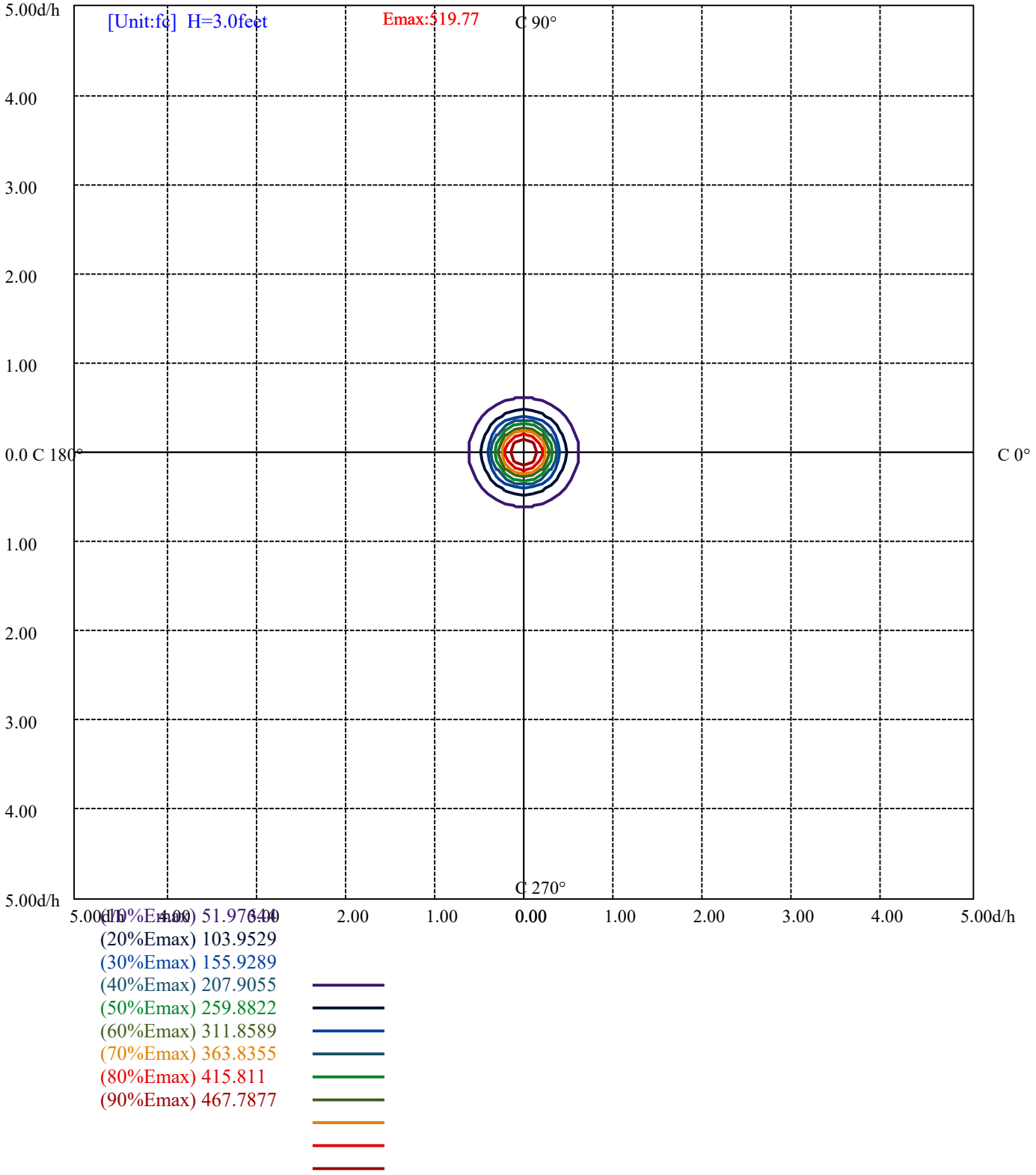
Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

## ISO illuminance diagram





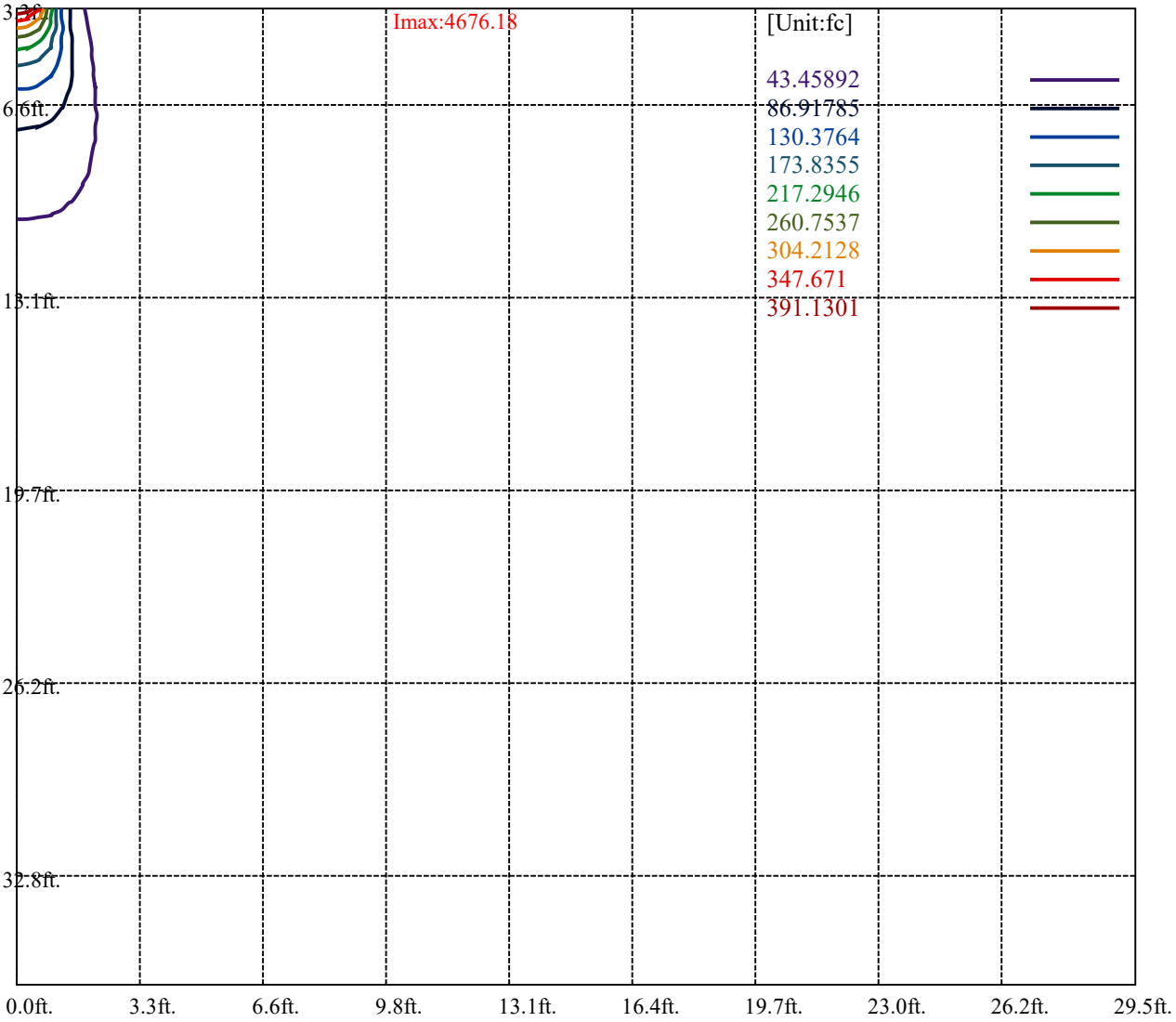

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

## Space ISO Lux diagram






Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Nata 2-2264-M

## Luminance Limitting Curve(no luminous side)



Luminance Table

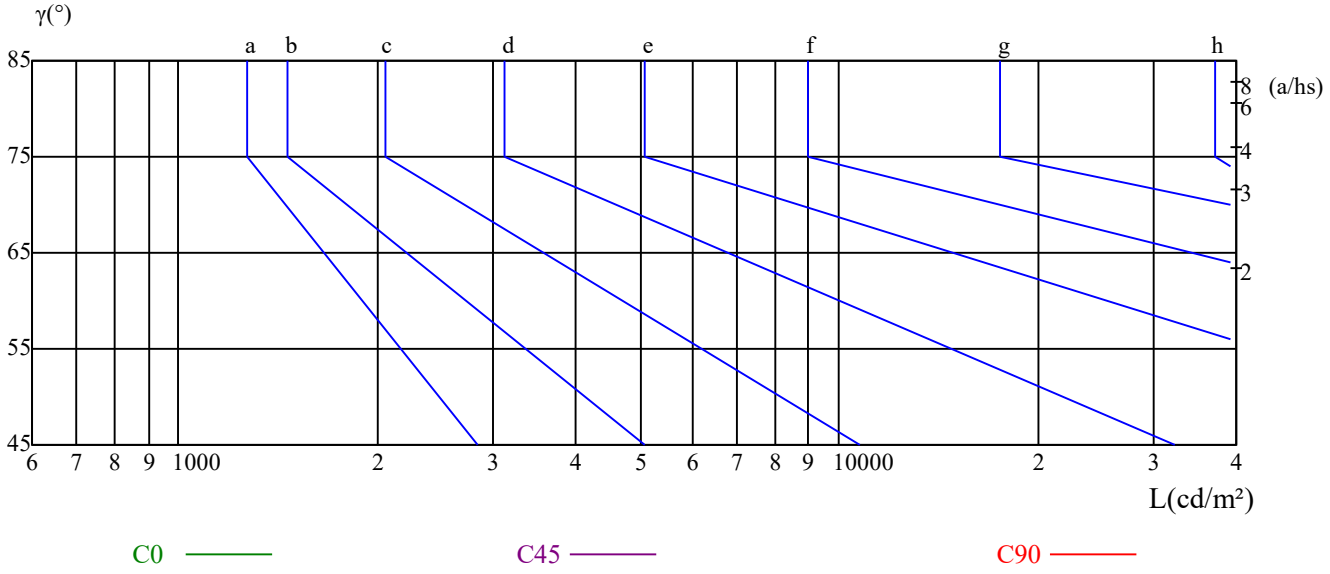
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Glare Table

| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.2 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | | | | | 2000 | 1000 | 500 | <=300 |
| | | a | b | c | d | e | f | g | h |

Luminance Limitting Curve



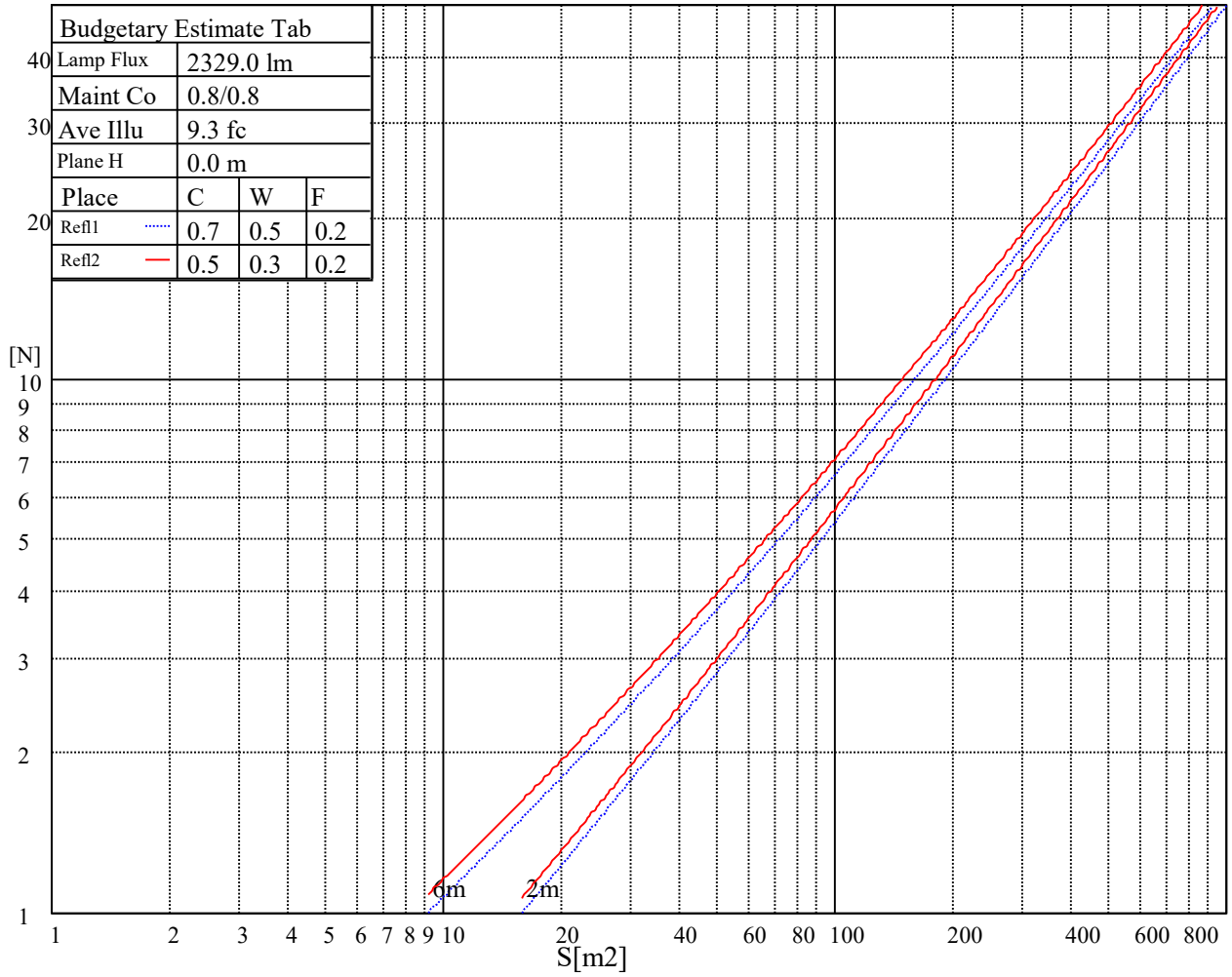

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

## Budgetary Estimate Table






Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

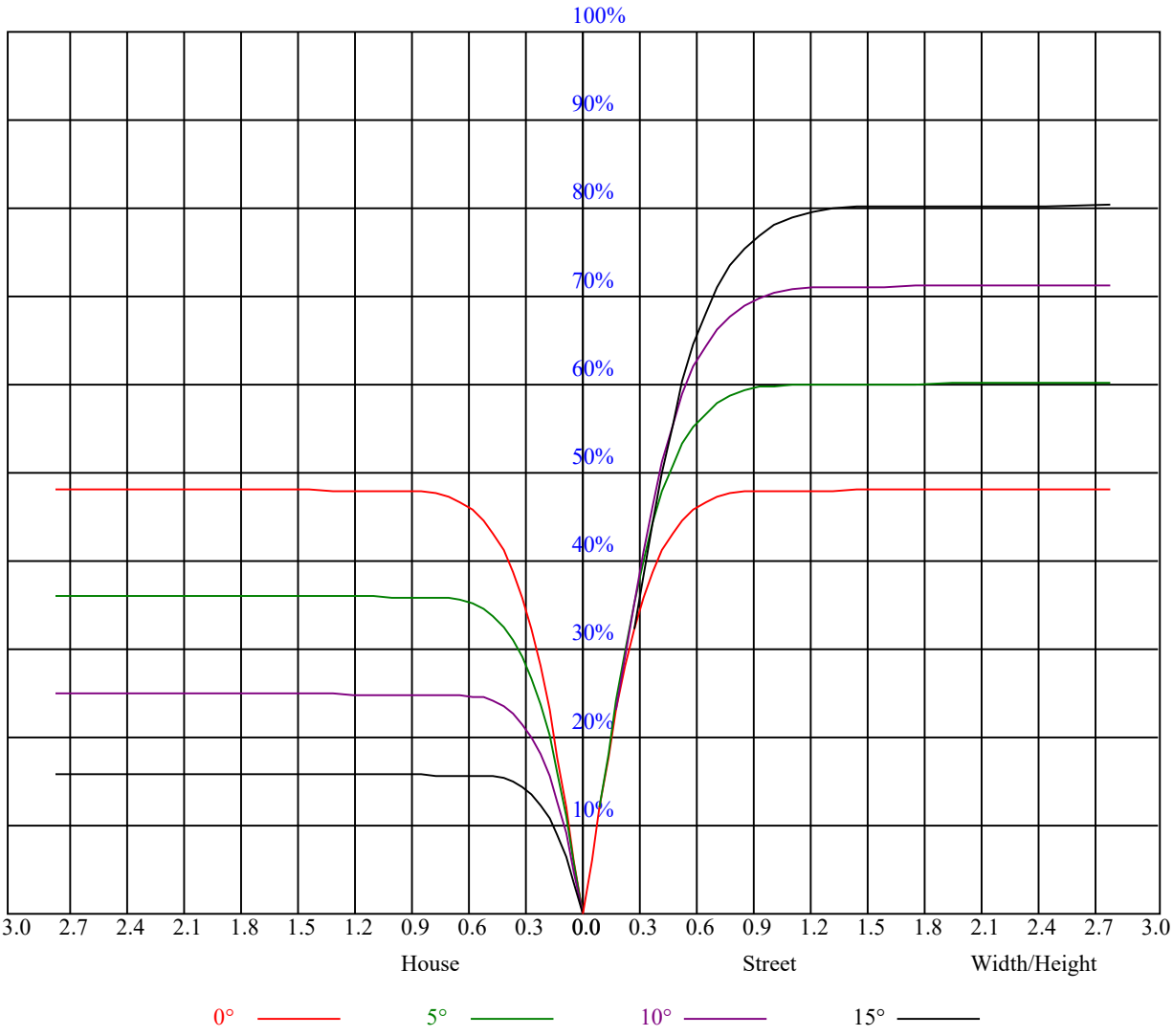
## Utilization factor table for indoor luminaire



| RHOCC | 80 | | | 70 | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHOW | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.15 | 1.15 | 1.15 | 1.12 | 1.12 | 1.12 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.96 |
| 1 | 1.08 | 1.06 | 1.04 | 1.06 | 1.04 | 1.02 | 1.02 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 2 | 1.02 | 0.98 | 0.96 | 1.00 | 0.97 | 0.95 | 0.97 | 0.95 | 0.93 | 0.94 | 0.92 | 0.91 | 0.92 | 0.90 | 0.89 | 0.87 |
| 3 | 0.96 | 0.92 | 0.89 | 0.95 | 0.91 | 0.88 | 0.93 | 0.90 | 0.87 | 0.90 | 0.88 | 0.86 | 0.88 | 0.86 | 0.84 | 0.83 |
| 4 | 0.91 | 0.87 | 0.84 | 0.90 | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.87 | 0.84 | 0.81 | 0.85 | 0.82 | 0.80 | 0.79 |
| 5 | 0.87 | 0.82 | 0.79 | 0.86 | 0.82 | 0.79 | 0.85 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.82 | 0.79 | 0.77 | 0.75 |
| 6 | 0.83 | 0.78 | 0.75 | 0.82 | 0.78 | 0.75 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.74 | 0.79 | 0.76 | 0.73 | 0.72 |
| 7 | 0.79 | 0.75 | 0.71 | 0.79 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.69 |
| 8 | 0.76 | 0.71 | 0.68 | 0.76 | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.67 | 0.73 | 0.70 | 0.67 | 0.66 |
| 9 | 0.73 | 0.68 | 0.65 | 0.73 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.70 | 0.67 | 0.64 | 0.63 |
| 10 | 0.70 | 0.65 | 0.62 | 0.70 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.61 |

## Coefficient Utilization Curve






Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Intensity data(cd)



| C/γ(°) | 0.0 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4676.30 | 4666.09 | 4655.42 | 4640.57 | 4606.69 | 4565.39 | 4508.32 | 4435.00 | 4344.05 |
| 45.0 | 4679.08 | 4673.51 | 4669.34 | 4667.02 | 4658.20 | 4651.70 | 4627.57 | 4581.17 | 4553.79 |
| 90.0 | 4675.83 | 4671.66 | 4678.62 | 4667.48 | 4661.91 | 4646.13 | 4618.76 | 4574.21 | 4507.39 |
| 135.0 | 4673.51 | 4680.01 | 4674.90 | 4664.70 | 4657.27 | 4630.82 | 4602.98 | 4555.18 | 4490.68 |
| 180.0 | 4676.30 | 4677.69 | 4674.44 | 4668.87 | 4649.38 | 4631.75 | 4582.10 | 4525.49 | 4482.33 |
| 225.0 | 4679.08 | 4683.72 | 4672.12 | 4655.42 | 4633.61 | 4593.24 | 4540.34 | 4471.66 | 4376.53 |
| 270.0 | 4675.83 | 4678.15 | 4678.62 | 4673.98 | 4672.12 | 4656.34 | 4626.65 | 4599.27 | 4536.62 |
| 315.0 | 4673.51 | 4673.51 | 4668.41 | 4653.56 | 4632.68 | 4591.84 | 4540.34 | 4478.15 | 4385.81 |
| 360.0 | 4676.30 | 4666.09 | 4655.42 | 4640.57 | 4606.69 | 4565.39 | 4508.32 | 4435.00 | 4344.05 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4233.15 | 4103.68 | 3940.80 | 3759.37 | 3566.33 | 3443.82 | 3226.19 | 2922.71 | 2788.61 |
| 45.0 | 4492.08 | 4406.23 | 4295.79 | 4157.97 | 3995.56 | 3802.06 | 3587.21 | 3350.55 | 3111.11 |
| 90.0 | 4423.86 | 4307.85 | 4144.51 | 3957.51 | 3742.20 | 3501.36 | 3349.63 | 2986.75 | 2829.44 |
| 135.0 | 4448.92 | 4303.21 | 4166.79 | 4078.62 | 3904.15 | 3707.40 | 3490.23 | 3257.28 | 3022.48 |
| 180.0 | 4393.70 | 4283.26 | 4148.69 | 3989.53 | 3811.34 | 3609.95 | 3396.96 | 3177.93 | 2957.52 |
| 225.0 | 4252.17 | 4096.72 | 3916.21 | 3756.12 | 3493.48 | 3252.64 | 3054.96 | 2761.23 | 2567.73 |
| 270.0 | 4442.42 | 4352.40 | 4216.44 | 4047.53 | 3841.04 | 3605.77 | 3358.44 | 3101.83 | 2837.33 |
| 315.0 | 4273.05 | 4138.48 | 4043.82 | 3784.42 | 3662.85 | 3443.82 | 3210.88 | 2979.79 | 2745.92 |
| 360.0 | 4233.15 | 4103.68 | 3940.80 | 3759.37 | 3566.33 | 3443.82 | 3226.19 | 2922.71 | 2788.61 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2568.66 | 2352.42 | 2137.57 | 1936.64 | 1754.28 | 1596.51 | 1464.26 | 1353.35 | 1252.19 |
| 45.0 | 2869.81 | 2628.98 | 2384.90 | 2141.75 | 1909.73 | 1702.31 | 1513.91 | 1361.71 | 1282.82 |
| 90.0 | 2564.48 | 2305.55 | 2045.23 | 1799.29 | 1575.16 | 1386.30 | 1237.35 | 1119.02 | 921.66 |
| 135.0 | 2783.04 | 2548.70 | 2311.12 | 2086.53 | 1878.18 | 1689.31 | 1526.90 | 1387.69 | 1271.22 |
| 180.0 | 2732.92 | 2514.83 | 2296.27 | 2087.45 | 1891.63 | 1712.52 | 1557.99 | 1432.24 | 1325.98 |
| 225.0 | 2325.04 | 2083.74 | 1855.90 | 1651.73 | 1473.54 | 1330.62 | 1212.29 | 1111.59 | 1027.60 |
| 270.0 | 2570.05 | 2306.48 | 2044.76 | 1800.22 | 1577.48 | 1387.69 | 1241.52 | 1121.80 | 1027.60 |
| 315.0 | 2509.72 | 2282.81 | 2048.94 | 1844.30 | 1656.83 | 1496.28 | 1362.63 | 1249.87 | 1151.96 |
| 360.0 | 2568.66 | 2352.42 | 2137.57 | 1936.64 | 1754.28 | 1596.51 | 1464.26 | 1353.35 | 1252.19 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1164.49 | 1090.25 | 892.48 | 892.48 | 811.92 | 747.98 | 609.00 | 512.20 | 457.49 |
| 45.0 | 1127.83 | 1040.59 | 993.26 | 929.69 | 863.80 | 782.13 | 695.82 | 603.94 | 516.70 |
| 90.0 | 896.74 | 885.84 | 834.01 | 767.09 | 690.44 | 625.42 | 543.06 | 447.75 | 385.15 |
| 135.0 | 1175.16 | 1092.10 | 1018.32 | 951.50 | 863.33 | 775.17 | 699.53 | 603.48 | 494.43 |
| 180.0 | 1233.17 | 1154.28 | 1094.89 | 1027.14 | 926.44 | 847.09 | 748.25 | 646.63 | 551.97 |
| 225.0 | 903.89 | 903.89 | 865.61 | 745.89 | 657.02 | 602.92 | 480.51 | 428.16 | 347.51 |
| 270.0 | 951.04 | 911.59 | 859.62 | 774.24 | 727.84 | 651.73 | 568.67 | 489.79 | 409.51 |
| 315.0 | 1067.51 | 908.53 | 908.53 | 854.38 | 761.71 | 665.47 | 569.74 | 478.74 | 393.13 |
| 360.0 | 1164.49 | 1090.25 | 892.48 | 892.48 | 811.92 | 747.98 | 609.00 | 512.20 | 457.49 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 365.75 | 282.69 | 204.64 | 136.80 | 81.86 | 54.43 | 44.32 | 36.38 | 29.93 |
| 45.0 | 429.93 | 349.65 | 270.76 | 270.76 | 114.71 | 81.58 | 31.28 | 21.67 | 19.26 |
| 90.0 | 308.26 | 236.19 | 167.05 | 105.61 | 55.03 | 24.27 | 16.01 | 13.27 | 10.77 |
| 135.0 | 426.21 | 344.54 | 264.27 | 249.42 | 167.84 | 71.09 | 42.13 | 33.55 | 27.93 |
| 180.0 | 462.87 | 373.78 | 288.86 | 272.16 | 240.60 | 104.96 | 61.21 | 51.32 | 46.45 |
| 225.0 | 267.38 | 195.03 | 125.38 | 69.61 | 34.06 | 21.76 | 17.82 | 14.25 | 11.42 |
| 270.0 | 333.87 | 259.16 | 232.25 | 164.96 | 67.33 | 29.00 | 16.01 | 13.69 | 10.63 |
| 315.0 | 311.41 | 235.03 | 161.39 | 102.18 | 54.06 | 33.13 | 27.42 | 21.95 | 18.24 |
| 360.0 | 365.75 | 282.69 | 204.64 | 136.80 | 81.86 | 54.43 | 44.32 | 36.38 | 29.93 |

Intensity data(cd)



| C/γ(°) | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 25.24 | 21.48 | 18.56 | 16.10 | 14.11 | 12.39 | 10.90 | 9.70 | 9.10 |
| 45.0 | 15.36 | 12.25 | 10.44 | 9.05 | 8.21 | 7.52 | 6.87 | 6.36 | 5.99 |
| 90.0 | 8.77 | 7.61 | 6.91 | 6.45 | 6.03 | 5.61 | 5.24 | 5.06 | 4.73 |
| 135.0 | 23.11 | 19.77 | 17.17 | 15.92 | 13.55 | 12.81 | 11.60 | 10.30 | 9.79 |
| 180.0 | 36.75 | 33.69 | 29.37 | 25.57 | 22.60 | 19.95 | 17.77 | 15.92 | 14.29 |
| 225.0 | 9.65 | 8.40 | 7.33 | 6.50 | 5.80 | 5.20 | 4.73 | 4.41 | 4.22 |
| 270.0 | 8.58 | 7.61 | 6.87 | 6.22 | 5.71 | 5.34 | 5.10 | 4.83 | 4.55 |
| 315.0 | 15.87 | 14.48 | 12.25 | 11.04 | 10.35 | 9.56 | 8.72 | 8.07 | 7.52 |
| 360.0 | 25.24 | 21.48 | 18.56 | 16.10 | 14.11 | 12.39 | 10.90 | 9.70 | 9.10 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 7.70 | 7.29 | 6.59 | 6.08 | 5.52 | 5.15 | 4.78 | 4.45 | 4.13 |
| 45.0 | 5.66 | 5.34 | 5.01 | 4.78 | 4.50 | 4.27 | 4.04 | 3.90 | 3.76 |
| 90.0 | 4.59 | 4.27 | 4.13 | 3.94 | 3.85 | 3.71 | 3.53 | 3.34 | 3.16 |
| 135.0 | 9.05 | 8.31 | 7.70 | 7.19 | 6.68 | 6.26 | 5.94 | 5.57 | 5.20 |
| 180.0 | 12.85 | 11.69 | 10.72 | 9.79 | 8.91 | 8.17 | 7.56 | 6.91 | 6.31 |
| 225.0 | 3.94 | 3.76 | 3.62 | 3.53 | 3.43 | 3.34 | 3.20 | 3.06 | 3.02 |
| 270.0 | 4.36 | 4.27 | 4.13 | 3.99 | 3.85 | 3.85 | 3.71 | 3.53 | 3.29 |
| 315.0 | 7.05 | 6.54 | 6.08 | 5.75 | 5.48 | 5.15 | 4.83 | 4.50 | 4.18 |
| 360.0 | 7.70 | 7.29 | 6.59 | 6.08 | 5.52 | 5.15 | 4.78 | 4.45 | 4.13 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3.71 | 3.48 | 3.20 | 2.83 | 2.55 | 2.41 | 2.23 | 2.04 | 1.90 |
| 45.0 | 3.39 | 3.06 | 2.97 | 2.74 | 2.64 | 2.41 | 2.13 | 1.95 | 1.81 |
| 90.0 | 2.97 | 2.78 | 2.60 | 2.41 | 2.23 | 2.04 | 1.90 | 1.86 | 1.67 |
| 135.0 | 4.73 | 4.41 | 4.18 | 3.76 | 3.39 | 3.06 | 2.83 | 2.46 | 2.23 |
| 180.0 | 5.66 | 5.20 | 4.78 | 4.08 | 3.62 | 3.29 | 2.92 | 2.64 | 2.41 |
| 225.0 | 2.88 | 2.69 | 2.51 | 2.32 | 2.09 | 1.86 | 1.72 | 1.62 | 1.48 |
| 270.0 | 3.06 | 2.88 | 2.69 | 2.41 | 2.32 | 2.09 | 1.86 | 1.76 | 1.72 |
| 315.0 | 3.81 | 3.53 | 3.34 | 3.06 | 2.88 | 2.51 | 2.23 | 2.09 | 1.95 |
| 360.0 | 3.71 | 3.48 | 3.20 | 2.83 | 2.55 | 2.41 | 2.23 | 2.04 | 1.90 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.72 | 1.48 | 1.30 | 1.07 | 0.97 | 0.97 | 0.84 | 0.74 | 0.79 |
| 45.0 | 1.67 | 1.48 | 1.39 | 1.21 | 1.07 | 0.88 | 0.84 | 0.84 | 0.74 |
| 90.0 | 1.67 | 1.44 | 1.25 | 1.11 | 0.93 | 0.88 | 0.88 | 0.84 | 0.79 |
| 135.0 | 2.09 | 1.95 | 1.76 | 1.39 | 1.16 | 1.07 | 1.02 | 0.93 | 0.88 |
| 180.0 | 2.18 | 1.90 | 1.58 | 1.30 | 1.11 | 1.02 | 0.88 | 0.79 | 0.79 |
| 225.0 | 1.44 | 1.16 | 1.02 | 0.88 | 0.74 | 0.79 | 0.70 | 0.70 | 0.65 |
| 270.0 | 1.53 | 1.35 | 1.21 | 1.07 | 0.93 | 0.79 | 0.74 | 0.74 | 0.74 |
| 315.0 | 1.67 | 1.48 | 1.35 | 1.11 | 0.97 | 0.93 | 0.93 | 0.88 | 0.79 |
| 360.0 | 1.72 | 1.48 | 1.30 | 1.07 | 0.97 | 0.97 | 0.84 | 0.74 | 0.79 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.70 | 0.65 | 0.65 | 0.56 | 0.56 | 0.60 | 0.56 | 0.51 | 0.51 |
| 45.0 | 0.70 | 0.70 | 0.65 | 0.60 | 0.60 | 0.56 | 0.56 | 0.56 | 0.51 |
| 90.0 | 0.70 | 0.70 | 0.60 | 0.65 | 0.65 | 0.60 | 0.56 | 0.60 | 0.56 |
| 135.0 | 0.88 | 0.84 | 0.74 | 0.74 | 0.70 | 0.65 | 0.65 | 0.60 | 0.60 |
| 180.0 | 0.74 | 0.65 | 0.65 | 0.56 | 0.56 | 0.56 | 0.51 | 0.46 | 0.37 |
| 225.0 | 0.65 | 0.56 | 0.56 | 0.51 | 0.46 | 0.51 | 0.46 | 0.42 | 0.42 |
| 270.0 | 0.65 | 0.60 | 0.56 | 0.56 | 0.51 | 0.51 | 0.51 | 0.46 | 0.46 |
| 315.0 | 0.79 | 0.79 | 0.74 | 0.79 | 0.74 | 0.70 | 0.65 | 0.56 | 0.60 |
| 360.0 | 0.70 | 0.65 | 0.65 | 0.56 | 0.56 | 0.60 | 0.56 | 0.51 | 0.51 |

## Intensity data(cd)

| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 0.51 |
| 45.0 | 0.51 |
| 90.0 | 0.56 |
| 135.0 | 0.65 |
| 180.0 | 0.42 |
| 225.0 | 0.42 |
| 270.0 | 0.46 |
| 315.0 | 0.70 |
| 360.0 | 0.51 |