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NATA

Client:

LumCAT: LN01D06337BF

Luminaire: 92.70.131.00

Report No:

Voltage(V): 220.5000

Test No: GC2019082945

Current(A): 0.0690

LampCAT: TRIDONIC SLE G7 15MM

Power (W): 14.0600

Lamp flux(lm): 1584.0

PF: 0.9170

Number of Lamps: 1

Ballast type: AC

Length(mm): 63

Width(mm): 63

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1493.15, Efficiency(%): 94.26% , Luminous Efficacy(lm/W): 106.20

Central intensity(cd): 2969.164, Maximum intensity(cd): 2969.164

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=38.8

[C90/270]Total=38.8

Field angle(10%Imax): [C0/180]Total=60.2

[C90/270]Total=60.2

Maximum s/h(1/2): C0_180=0.66 C90_270=0.66

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(%): 94.26%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.109%

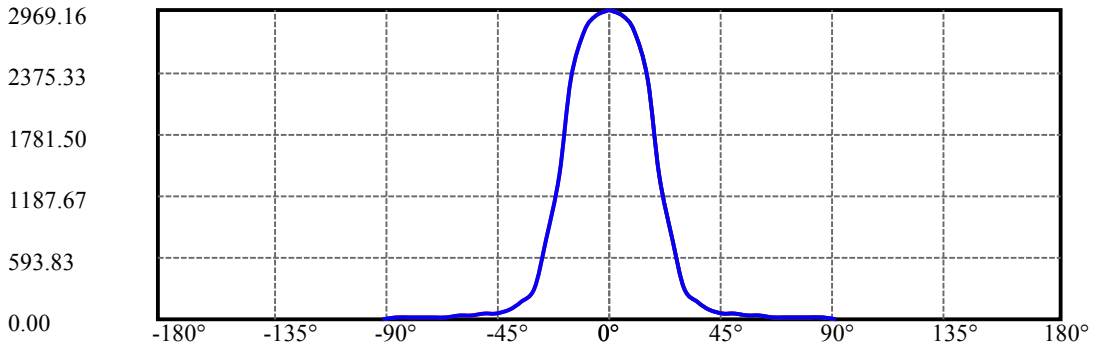
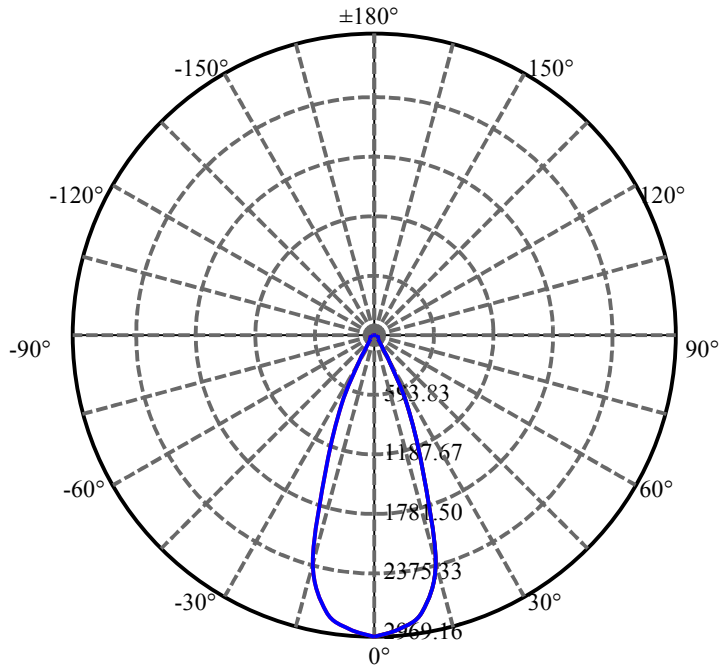
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 2969.164 | 0.000 | 0 | .000% | .000% |
| 5.0 | 2910.986 | 70.296 | 70.296 | 4.438% | 4.708% |
| 10.0 | 2771.950 | 203.296 | 273.592 | 12.834% | 18.323% |
| 15.0 | 2307.337 | 301.300 | 574.892 | 19.021% | 38.502% |
| 20.0 | 1381.039 | 303.974 | 878.866 | 19.190% | 58.860% |
| 25.0 | 756.357 | 224.173 | 1103.039 | 14.152% | 73.873% |
| 30.0 | 300.386 | 133.732 | 1236.771 | 8.443% | 82.830% |
| 35.0 | 174.395 | 69.915 | 1306.686 | 4.414% | 87.512% |
| 40.0 | 87.192 | 43.644 | 1350.33 | 2.755% | 90.435% |
| 45.0 | 63.346 | 27.873 | 1378.203 | 1.760% | 92.302% |
| 50.0 | 48.236 | 22.547 | 1400.75 | 1.423% | 93.812% |
| 55.0 | 37.471 | 18.636 | 1419.386 | 1.176% | 95.060% |
| 60.0 | 30.290 | 15.663 | 1435.048 | .989% | 96.109% |
| 65.0 | 25.852 | 13.648 | 1448.696 | .862% | 97.023% |
| 70.0 | 22.384 | 12.214 | 1460.91 | .771% | 97.841% |
| 75.0 | 18.579 | 10.707 | 1471.617 | .676% | 98.558% |
| 80.0 | 15.232 | 9.047 | 1480.664 | .571% | 99.164% |
| 85.0 | 11.264 | 7.200 | 1487.864 | .455% | 99.646% |
| 90.0 | 8.051 | 5.289 | 1493.152 | .334% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 1236.77 | 78.08% | 82.83% |
| 0-40 | 1350.33 | 85.25% | 90.43% |
| 0-60 | 1435.05 | 90.60% | 96.11% |
| 0-90 | 1487.86 | 93.93% | 99.65% |
| 0-120 | 1487.86 | 93.93% | 99.65% |
| 0-180 | 1493.15 | 94.26% | 100.00% |
| 60-90 | 68.48 | 4.32% | 4.59% |
| 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% |
| 0-28.42 | 1194.52 | 75.41% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 273.59 |
| 10-20 | 605.27 |
| 20-30 | 357.91 |
| 30-40 | 113.56 |
| 40-50 | 50.42 |
| 50-60 | 34.30 |
| 60-70 | 25.86 |
| 70-80 | 19.75 |
| 80-90 | 7.20 |
| 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 |



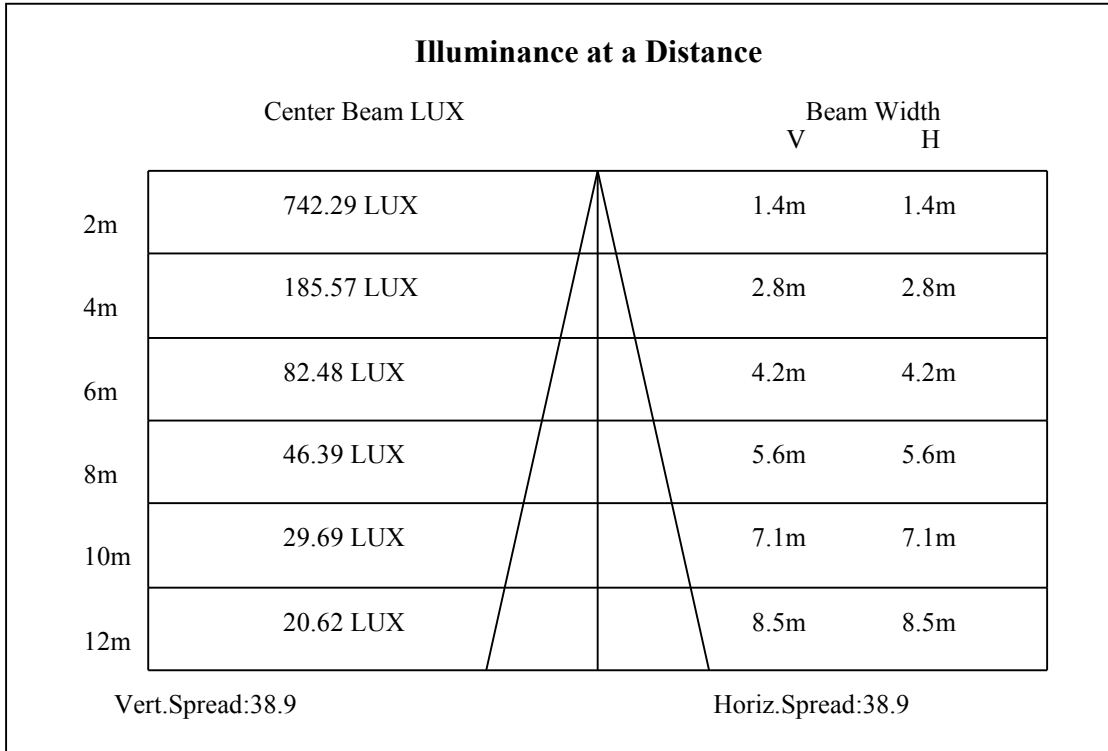
C0(Max): —————

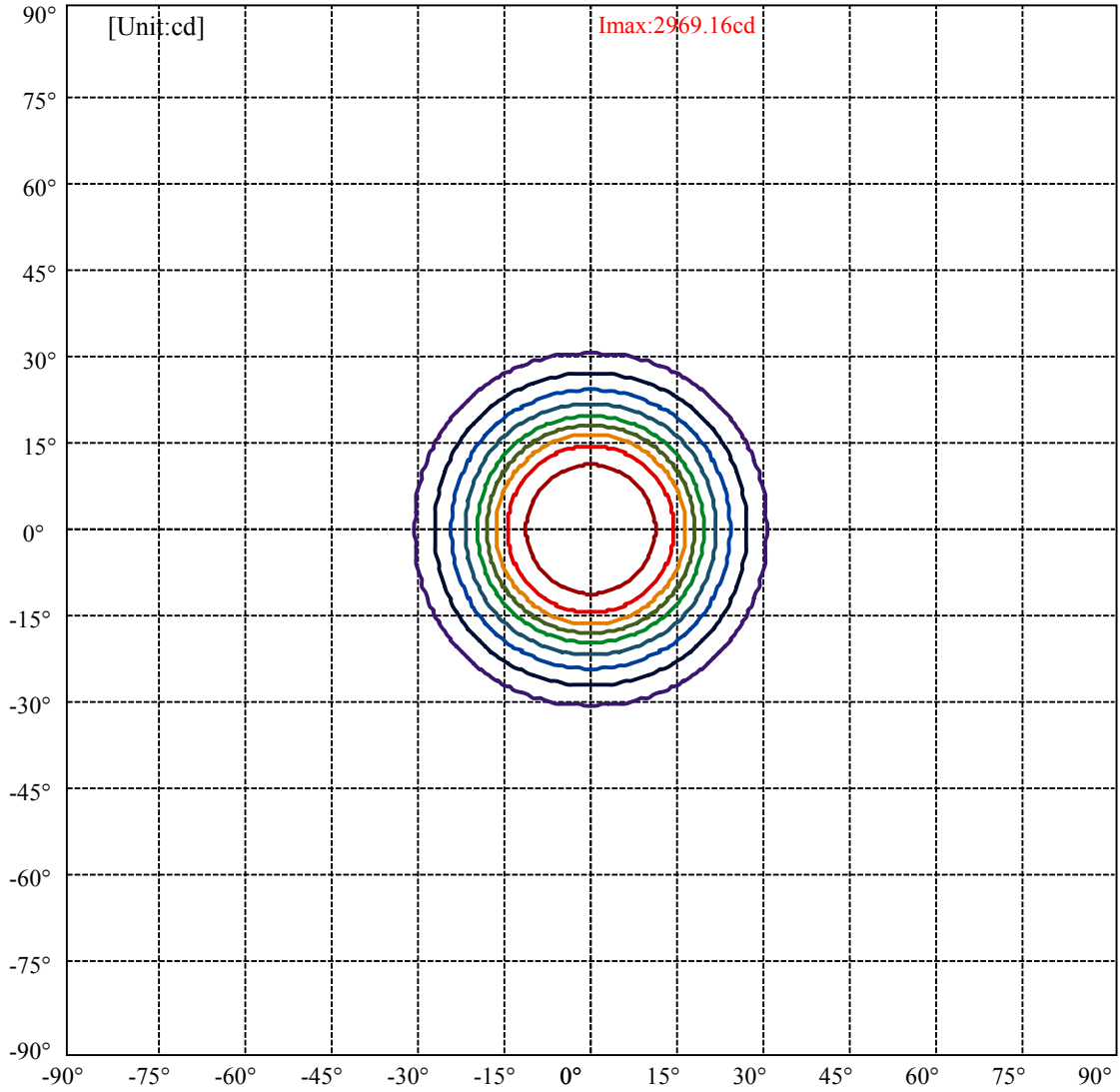
C0/C180: —————

C90/C270: —————

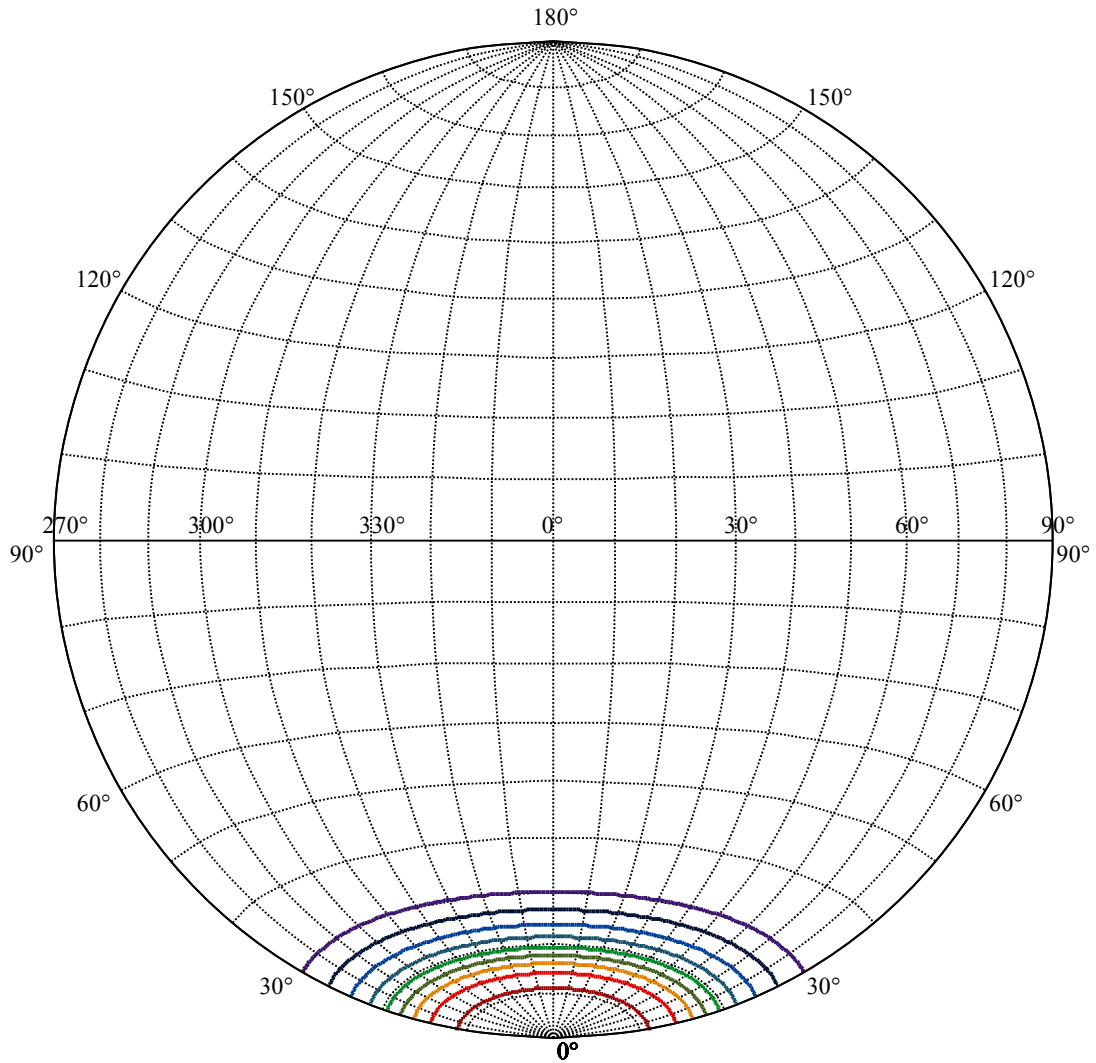
Field angle(10%Imax):C0/180Left:30.1 Right:30.1
:C90/270Left:30.1 Right:30.1

Beam Angle(50%Imax):C0/180Left:19.4 Right:19.4
:C90/270Left:19.4 Right:19.4





| | |
|--------------------------------|---|
| (10%I _{max}) 296.916 | — |
| (20%I _{max}) 593.833 | — |
| (30%I _{max}) 890.749 | — |
| (40%I _{max}) 1187.67 | — |
| (50%I _{max}) 1484.58 | — |
| (60%I _{max}) 1781.5 | — |
| (70%I _{max}) 2078.41 | — |
| (80%I _{max}) 2375.33 | — |
| (90%I _{max}) 2672.25 | — |



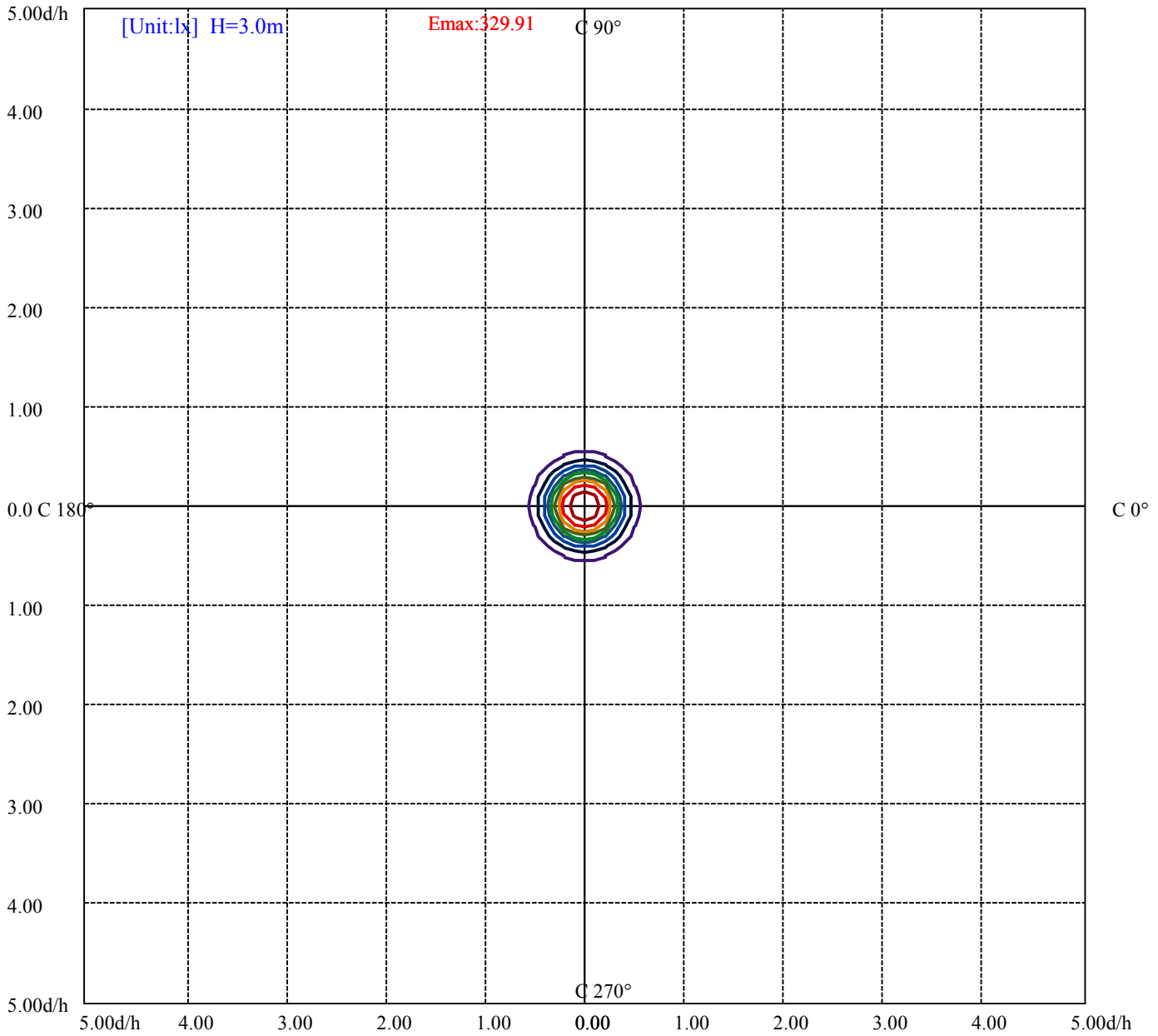
House

[Unit:cd]

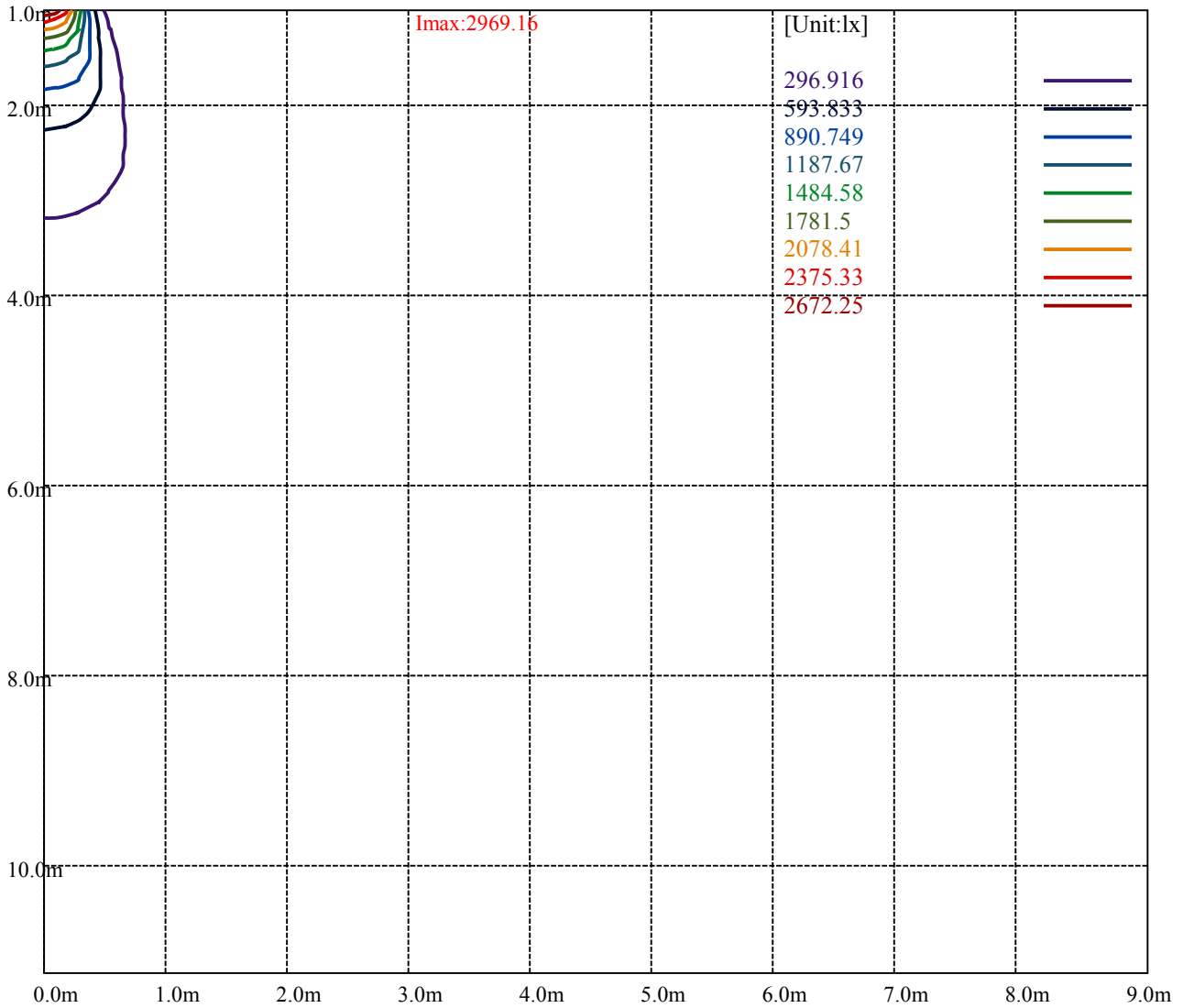
Road

Imax:2969.16

| | |
|-------------------|---|
| (10%Imax) 296.916 | — |
| (20%Imax) 593.833 | — |
| (30%Imax) 890.749 | — |
| (40%Imax) 1187.67 | — |
| (50%Imax) 1484.58 | — |
| (60%Imax) 1781.5 | — |
| (70%Imax) 2078.41 | — |
| (80%Imax) 2375.33 | — |
| (90%Imax) 2672.25 | — |



| | |
|--------------------|---|
| (10%Emax) 32.99067 | — |
| (20%Emax) 65.98133 | — |
| (30%Emax) 98.97211 | — |
| (40%Emax) 131.9622 | — |
| (50%Emax) 164.9533 | — |
| (60%Emax) 197.9444 | — |
| (70%Emax) 230.9344 | — |
| (80%Emax) 263.9256 | — |
| (90%Emax) 296.9167 | — |



Luminance Table

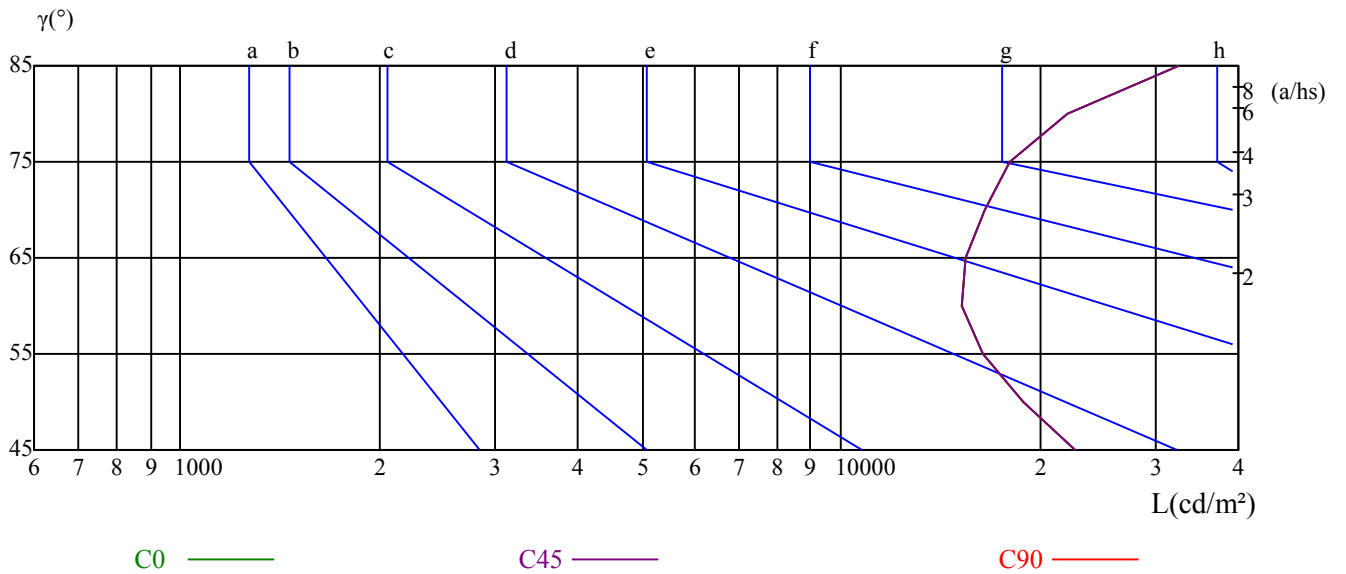
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C0 | 22571 | 18907 | 16460 | 15263 | 15412 | 16489 | 18086 | 22101 | 32564 |
| C45 | 22571 | 18907 | 16460 | 15263 | 15412 | 16489 | 18086 | 22101 | 32564 |
| C90 | 22571 | 18907 | 16460 | 15263 | 15412 | 16489 | 18086 | 22101 | 32564 |

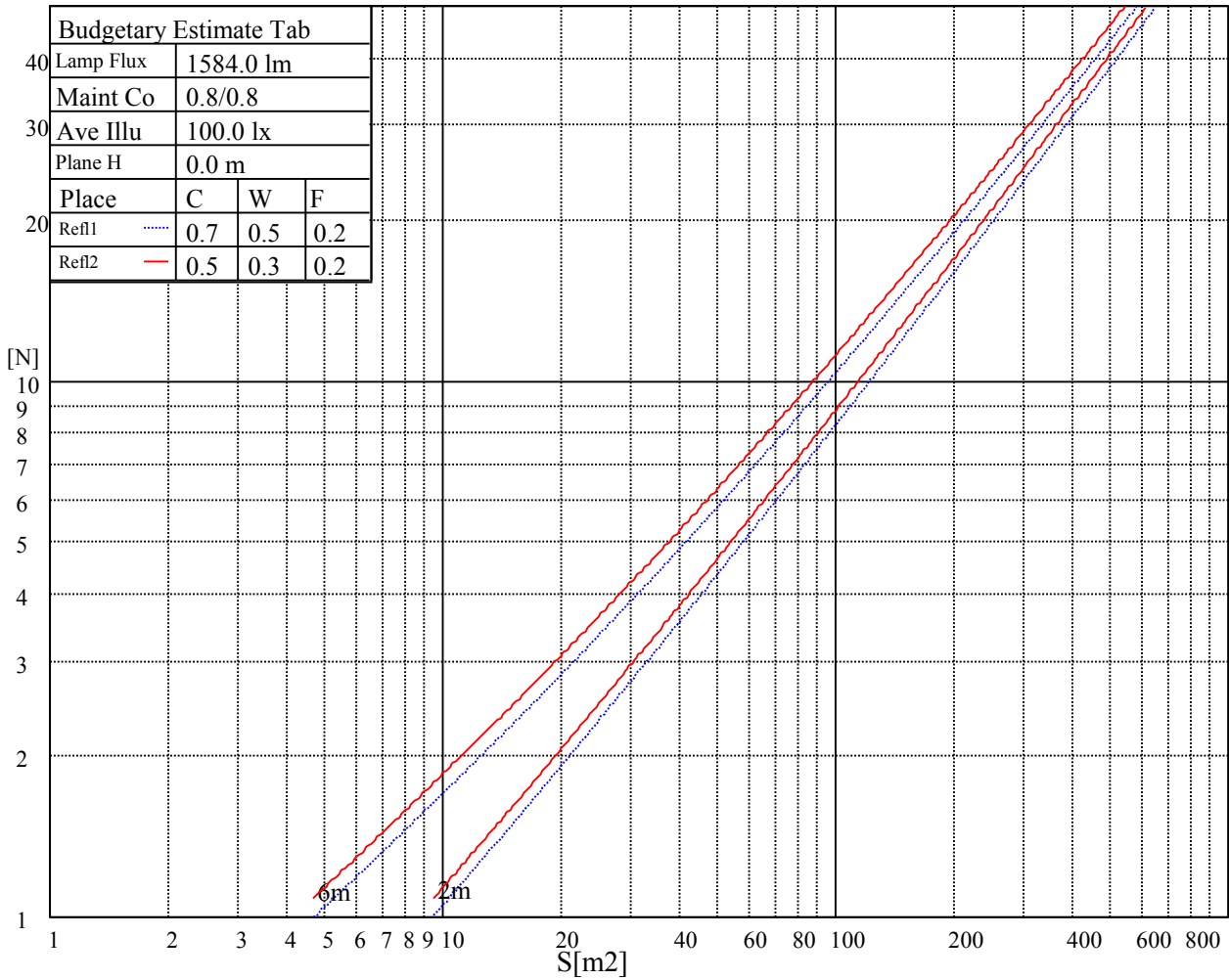
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 15412 | 15412 | 15412 | 18086 | 18086 | 18086 | 32564 | 32564 | 32564 |

Glare Table

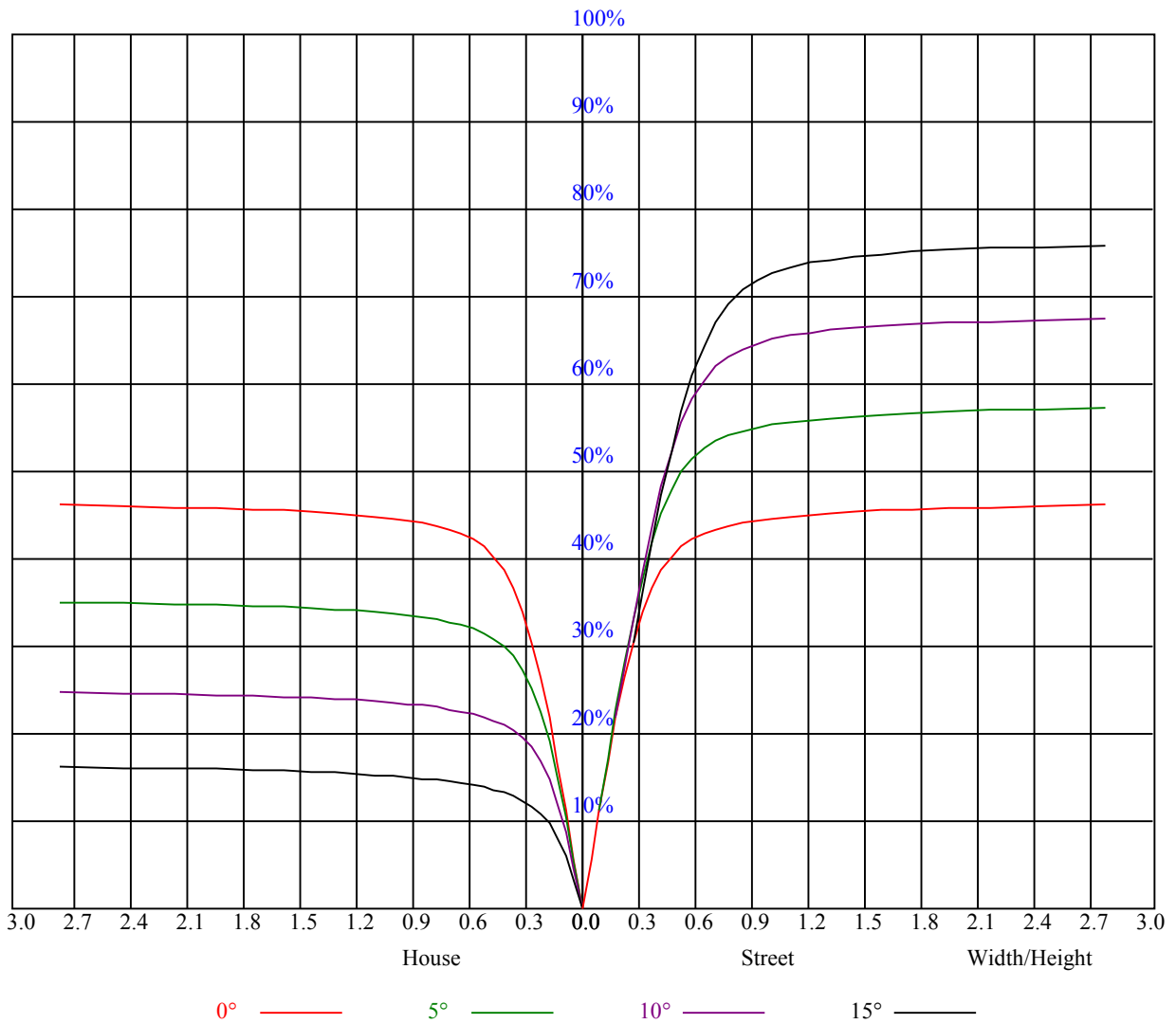
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 |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

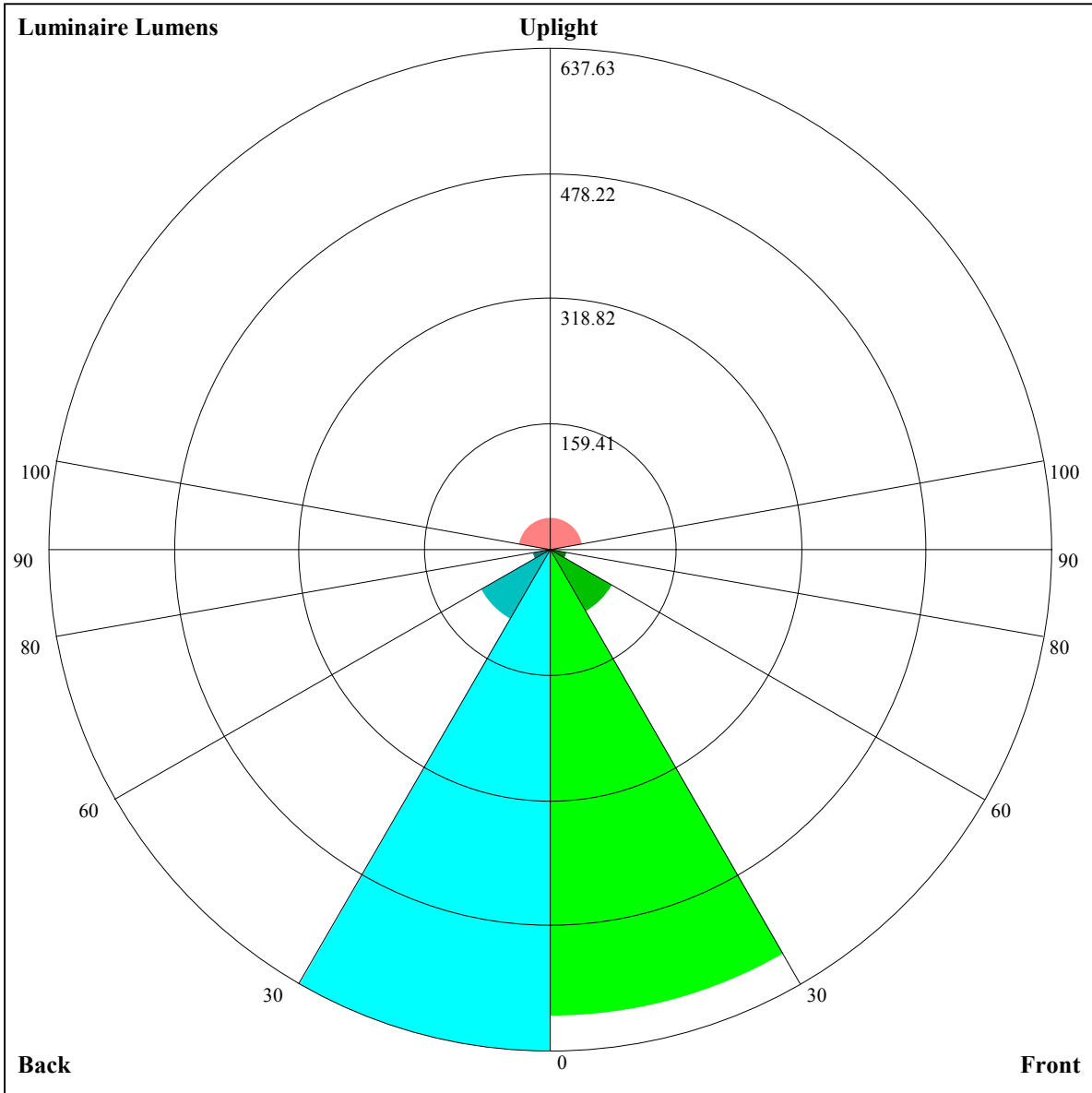
Luminance Limiting Curve





| 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 | COEFFICIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.12 | 1.12 | 1.12 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.94 |
| 1 | 1.04 | 1.02 | 1.00 | 1.02 | 1.00 | 0.98 | 0.98 | 0.97 | 0.95 | 0.95 | 0.94 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 |
| 2 | 0.98 | 0.94 | 0.91 | 0.96 | 0.93 | 0.90 | 0.93 | 0.90 | 0.88 | 0.90 | 0.88 | 0.86 | 0.88 | 0.86 | 0.84 | 0.83 |
| 3 | 0.92 | 0.87 | 0.84 | 0.90 | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.86 | 0.83 | 0.81 | 0.84 | 0.81 | 0.79 | 0.78 |
| 4 | 0.87 | 0.82 | 0.78 | 0.86 | 0.81 | 0.78 | 0.84 | 0.80 | 0.77 | 0.82 | 0.79 | 0.76 | 0.80 | 0.77 | 0.75 | 0.74 |
| 5 | 0.82 | 0.77 | 0.73 | 0.81 | 0.77 | 0.73 | 0.80 | 0.76 | 0.73 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.70 |
| 6 | 0.78 | 0.73 | 0.69 | 0.77 | 0.73 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.67 |
| 7 | 0.75 | 0.69 | 0.66 | 0.74 | 0.69 | 0.66 | 0.73 | 0.69 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.64 |
| 8 | 0.71 | 0.66 | 0.63 | 0.71 | 0.66 | 0.63 | 0.70 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.65 | 0.62 | 0.61 |
| 9 | 0.68 | 0.63 | 0.60 | 0.68 | 0.63 | 0.60 | 0.67 | 0.63 | 0.60 | 0.66 | 0.62 | 0.60 | 0.65 | 0.62 | 0.59 | 0.58 |
| 10 | 0.65 | 0.61 | 0.57 | 0.65 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.63 | 0.59 | 0.57 | 0.56 |





Luminaire Lumens:

FL=593.69,FM=91.36,FH=22.32,FVH=6.19

BL=637.63,BM=102.68,BH=23.17,BVH=6.23

UL=8.78,UH=41.8

BUG Rating:B2-U2-G0

Intensity data(cd)

| | | | | | | | | | |
|-----------------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| C/ γ (°) | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
| 0.0 | 2972.64 | 2935.99 | 2810.70 | 2094.23 | 896.28 | 500.65 | 201.76 | 110.21 | 75.31 |
| 45.0 | 2961.97 | 2972.18 | 2885.87 | 2552.69 | 1709.55 | 923.94 | 423.24 | 250.62 | 89.65 |
| 90.0 | 2976.82 | 2928.56 | 2768.93 | 2248.75 | 1397.25 | 718.51 | 257.54 | 124.96 | 81.72 |
| 135.0 | 2965.22 | 2922.99 | 2775.89 | 2510.47 | 1818.59 | 942.50 | 426.49 | 286.36 | 106.50 |
| 180.0 | 2972.64 | 2889.58 | 2746.66 | 2536.92 | 1809.78 | 1075.21 | 394.47 | 239.02 | 94.52 |
| 225.0 | 2961.97 | 2818.59 | 2670.09 | 2054.79 | 919.25 | 623.34 | 230.86 | 116.80 | 75.96 |
| 270.0 | 2976.82 | 2921.14 | 2805.13 | 2420.44 | 1652.93 | 791.69 | 288.68 | 147.52 | 93.69 |
| 315.0 | 2965.22 | 2898.86 | 2712.32 | 2040.40 | 844.68 | 475.03 | 180.04 | 119.67 | 80.18 |
| 360.0 | 2972.64 | 2935.99 | 2810.70 | 2094.23 | 896.28 | 500.65 | 201.76 | 110.21 | 75.31 |
| C/ γ (°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 57.45 | 42.78 | 34.71 | 28.96 | 25.06 | 21.25 | 17.49 | 13.92 | 9.74 |
| 45.0 | 68.72 | 51.93 | 39.16 | 31.00 | 25.94 | 22.69 | 19.77 | 16.61 | 13.41 |
| 90.0 | 60.09 | 46.31 | 36.84 | 28.91 | 25.29 | 21.90 | 18.00 | 14.76 | 11.37 |
| 135.0 | 72.53 | 54.25 | 42.32 | 33.87 | 28.77 | 24.87 | 19.91 | 16.52 | 12.30 |
| 180.0 | 69.14 | 51.88 | 40.28 | 32.58 | 27.24 | 23.71 | 20.23 | 16.61 | 12.39 |
| 225.0 | 57.63 | 45.06 | 33.18 | 27.66 | 24.13 | 20.88 | 17.54 | 14.25 | 10.39 |
| 270.0 | 64.04 | 49.74 | 38.47 | 30.35 | 25.85 | 22.64 | 18.84 | 15.41 | 10.86 |
| 315.0 | 57.17 | 43.94 | 34.80 | 29.00 | 24.55 | 21.11 | 16.84 | 13.78 | 9.65 |
| 360.0 | 57.45 | 42.78 | 34.71 | 28.96 | 25.06 | 21.25 | 17.49 | 13.92 | 9.74 |
| C/ γ (°) | 90.0 | | | | | | | | |
| 0.0 | 7.56 | | | | | | | | |
| 45.0 | 12.95 | | | | | | | | |
| 90.0 | 7.38 | | | | | | | | |
| 135.0 | 7.24 | | | | | | | | |
| 180.0 | 7.38 | | | | | | | | |
| 225.0 | 7.15 | | | | | | | | |
| 270.0 | 7.29 | | | | | | | | |
| 315.0 | 7.47 | | | | | | | | |
| 360.0 | 7.56 | | | | | | | | |