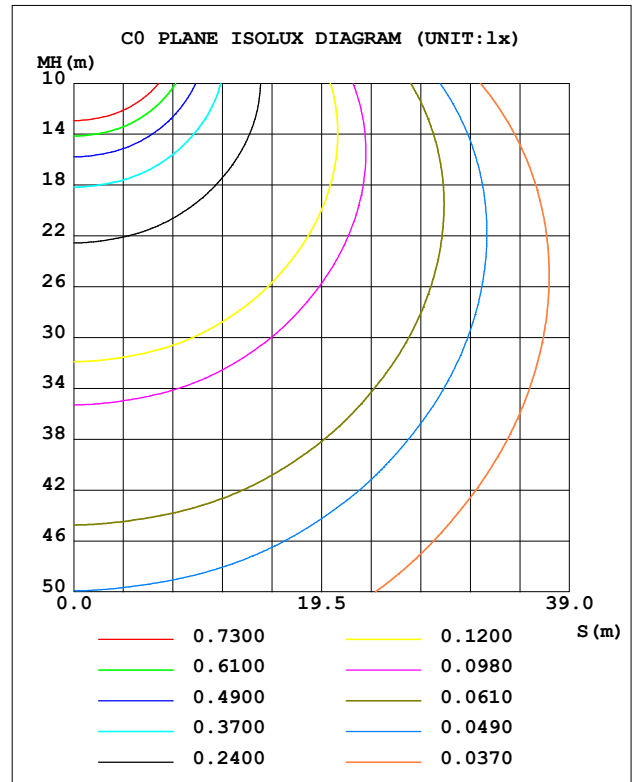
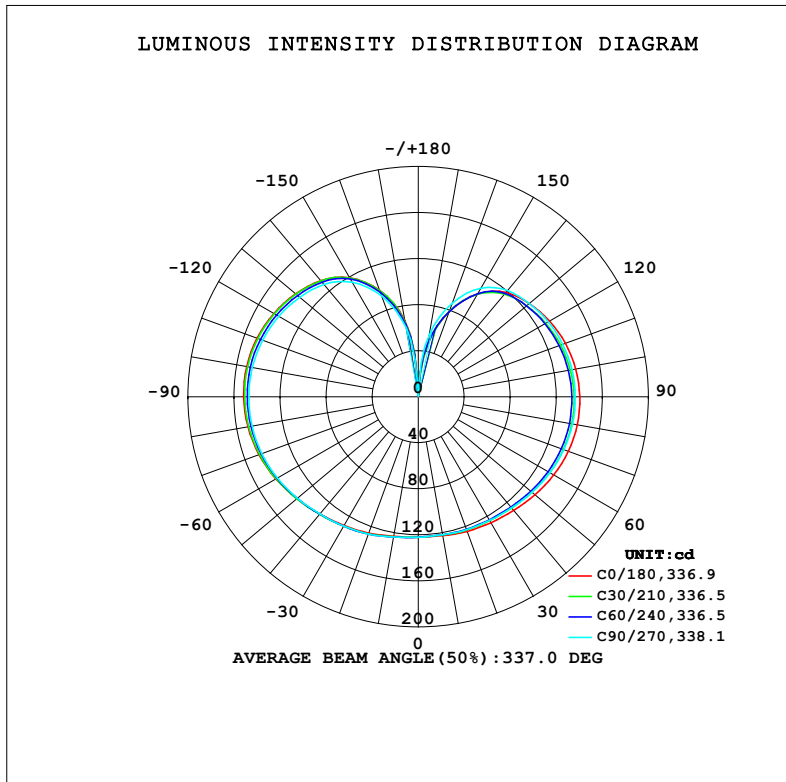


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

| DATA OF LAMP | | PHOTOMETRIC DATA | | | |
|------------------|-----------|------------------|---------|------------------------|-----------|
| MODEL | 99LED839W | Imax(cd) | 151.9 | S/MH(C0/180) | 1.65 |
| NOMINAL POWER(W) | 12 | LOR(%) | 109.7 | S/MH(C90/270) | 1.65 |
| RATED VOLTAGE(V) | 230 | TOTAL FLUX(lm) | 1668.3 | η UP,DN(C0-180) | 26.0,27.6 |
| NOMINAL FLUX(lm) | 1521 | CIE CLASS | DIFFUSE | η UP,DN(C180-360) | 27.4,28.8 |
| LAMPS INSIDE | 1 | η up (%) | 53.3 | CIBSE SHR NOM | 1.75 |
| TEST VOLTAGE(V) | 230 | η down (%) | 56.3 | CIBSE SHR MAX | 1.75 |



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | %lum,lamp |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|-------------|--------------|-----------|
| 10 | 122.6 | 121.8 | 121.6 | 122.2 | 123.0 | 123.5 | 123.6 | 123.4 | 0- 10 | 11.68 | 11.68 | 0.70,0.77 |
| 20 | 124.5 | 122.8 | 123.0 | 124.6 | 126.1 | 126.9 | 126.9 | 126.1 | 10- 20 | 35.16 | 46.83 | 2.81,3.08 |
| 30 | 126.4 | 123.8 | 124.1 | 126.8 | 129.1 | 129.8 | 129.7 | 128.9 | 20- 30 | 58.43 | 105.3 | 6.31,6.92 |
| 40 | 129.0 | 125.5 | 126.2 | 130.0 | 132.9 | 133.2 | 133.0 | 132.3 | 30- 40 | 80.89 | 186.2 | 11.2,12.2 |
| 50 | 132.5 | 128.1 | 129.0 | 134.2 | 137.8 | 137.7 | 137.2 | 136.6 | 40- 50 | 102.4 | 288.6 | 17.3,19 |
| 60 | 135.9 | 130.7 | 132.1 | 138.6 | 142.9 | 142.2 | 141.4 | 140.8 | 50- 60 | 122.2 | 410.7 | 24.6,27 |
| 70 | 138.7 | 132.8 | 134.5 | 142.3 | 147.3 | 146.0 | 144.7 | 144.1 | 60- 70 | 138.8 | 549.5 | 32.9,36.1 |
| 80 | 140.3 | 134.0 | 136.0 | 144.9 | 150.3 | 148.6 | 146.7 | 146.0 | 70- 80 | 150.7 | 700.1 | 42,46 |
| 90 | 140.3 | 133.9 | 136.4 | 146.1 | 151.7 | 149.7 | 147.2 | 146.1 | 80- 90 | 156.8 | 857.0 | 51.4,56.3 |
| 100 | 138.9 | 132.8 | 135.7 | 145.7 | 151.4 | 149.4 | 146.4 | 144.7 | 90-100 | 156.7 | 1014 | 60.8,66.6 |
| 110 | 136.0 | 130.4 | 133.6 | 143.4 | 149.0 | 147.2 | 143.9 | 141.5 | 100-110 | 150.2 | 1164 | 69.8,76.5 |
| 120 | 131.7 | 127.1 | 130.4 | 139.6 | 144.9 | 143.4 | 139.9 | 136.9 | 110-120 | 137.8 | 1302 | 78,85.6 |
| 130 | 126.0 | 122.6 | 126.1 | 134.2 | 139.2 | 137.9 | 134.4 | 130.9 | 120-130 | 120.4 | 1422 | 85.2,93.5 |
| 140 | 118.6 | 116.6 | 120.6 | 127.3 | 131.8 | 130.9 | 127.5 | 123.2 | 130-140 | 99.34 | 1521 | 91.2,100 |
| 150 | 103.2 | 103.0 | 108.8 | 115.3 | 119.5 | 118.8 | 114.9 | 108.9 | 140-150 | 74.77 | 1596 | 95.7,105 |
| 160 | 78.70 | 78.78 | 86.41 | 94.32 | 98.44 | 97.79 | 93.13 | 86.45 | 150-160 | 47.08 | 1643 | 98.5,108 |
| 170 | 45.41 | 45.26 | 54.40 | 63.25 | 67.22 | 64.82 | 60.76 | 53.01 | 160-170 | 21.40 | 1665 | 99.8,109 |
| 180 | 1.611 | 1.629 | 1.650 | 1.660 | 1.624 | 1.641 | 1.658 | 1.658 | 170-180 | 3.581 | 1668 | 100,110 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 234.74 lm

%lum = 14.1%
%lamp = 15.4%

Conical surface Flux(130deg): 478.27 lm

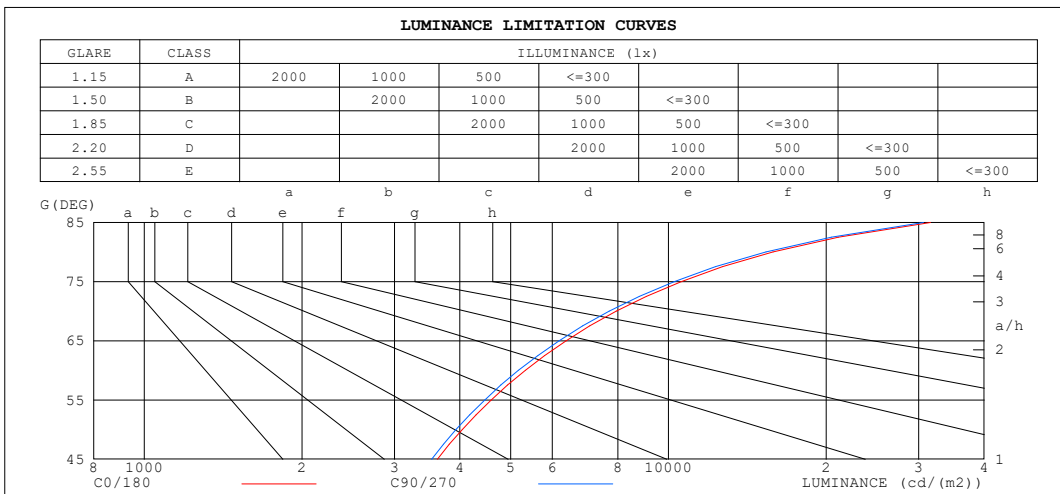
%lum = 28.7%
%lamp = 31.4%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |



| LUMINANCE cd/(m2) | | |
|-------------------|--------|---------|
| G (DEG) | C0/180 | C90/270 |
| 85 | 31595 | 30641 |
| 80 | 15833 | 15343 |
| 75 | 10577 | 10246 |
| 70 | 7950 | 7703 |
| 65 | 6376 | 6182 |
| 60 | 5330 | 5173 |
| 55 | 4588 | 4459 |
| 50 | 4040 | 3932 |
| 45 | 3623 | 3533 |

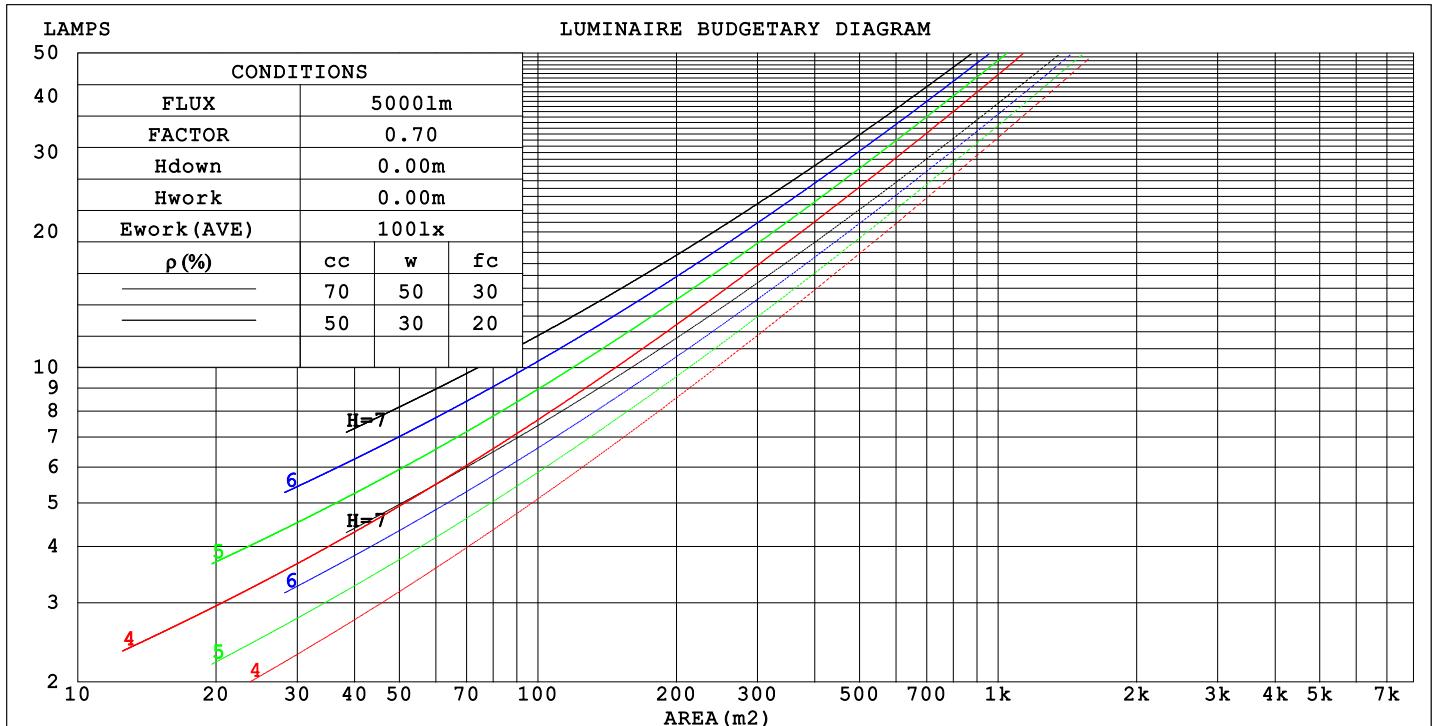
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|-----|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| pw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | | | | | | | | | | |



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

WEC AND CCEC

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| pw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coefficients(WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .446 | .253 | .080 | .422 | .240 | .076 | .376 | .216 | .069 | .335 | .193 | .062 | .296 | .172 | .055 | |
| 2.0 | .373 | .204 | .063 | .350 | .193 | .059 | .309 | .172 | .053 | .271 | .152 | .048 | .236 | .133 | .042 | |
| 3.0 | .325 | .173 | .052 | .305 | .163 | .049 | .267 | .145 | .044 | .232 | .127 | .039 | .200 | .111 | .034 | |
| 4.0 | .290 | .151 | .044 | .271 | .142 | .042 | .237 | .125 | .037 | .204 | .110 | .033 | .174 | .095 | .029 | |
| 5.0 | .262 | .133 | .039 | .245 | .126 | .037 | .213 | .111 | .033 | .183 | .097 | .029 | .155 | .083 | .025 | |
| 6.0 | .238 | .120 | .034 | .223 | .113 | .032 | .194 | .099 | .029 | .166 | .086 | .025 | .140 | .074 | .022 | |
| 7.0 | .219 | .108 | .031 | .205 | .102 | .029 | .178 | .090 | .026 | .152 | .078 | .023 | .128 | .067 | .020 | |
| 8.0 | .203 | .099 | .028 | .189 | .093 | .026 | .164 | .082 | .023 | .140 | .071 | .021 | .118 | .061 | .018 | |
| 9.0 | .188 | .091 | .025 | .176 | .086 | .024 | .153 | .075 | .021 | .130 | .065 | .019 | .109 | .056 | .016 | |
| 10.0 | .176 | .084 | .023 | .165 | .079 | .022 | .143 | .070 | .020 | .122 | .060 | .017 | .102 | .051 | .015 | |

| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------------------|------|------|------|------|------|------|------|------|---|
| pw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients (CCEC) | | | | | | | | | |
| 0.0 | .615 | .615 | .615 | .526 | .526 | .526 | .359 | .359 | .359 | .206 | .206 | .206 | .066 | .066 | .066 | |
| 1.0 | .615 | .580 | .549 | .526 | .498 | .472 | .360 | .343 | .327 | .207 | .198 | .190 | .066 | .064 | .061 | |
| 2.0 | .608 | .557 | .514 | .521 | .479 | .444 | .357 | .332 | .310 | .206 | .193 | .182 | .066 | .062 | .059 | |
| 3.0 | .601 | .540 | .492 | .515 | .466 | .427 | .354 | .324 | .299 | .204 | .189 | .176 | .066 | .061 | .058 | |
| 4.0 | .593 | .528 | .478 | .509 | .456 | .415 | .350 | .318 | .292 | .202 | .186 | .173 | .065 | .061 | .057 | |
| 5.0 | .585 | .518 | .468 | .502 | .448 | .408 | .346 | .313 | .288 | .200 | .184 | .171 | .065 | .060 | .056 | |
| 6.0 | .577 | .510 | .462 | .496 | .441 | .402 | .342 | .309 | .284 | .198 | .182 | .169 | .064 | .059 | .056 | |
| 7.0 | .569 | .503 | .457 | .490 | .436 | .398 | .338 | .306 | .282 | .197 | .180 | .168 | .064 | .059 | .055 | |
| 8.0 | .562 | .497 | .453 | .484 | .431 | .395 | .335 | .303 | .280 | .195 | .179 | .167 | .063 | .059 | .055 | |
| 9.0 | .556 | .492 | .450 | .479 | .427 | .392 | .332 | .300 | .279 | .193 | .177 | .166 | .063 | .058 | .055 | |
| 10.0 | .549 | .488 | .447 | .474 | .424 | .390 | .329 | .298 | .277 | .192 | .176 | .166 | .062 | .058 | .055 | |

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

| | | | | | | | | | | | | | | |
|-----------------------------------------------------------------|---------------|------------------|------|------|-------------|---------------|----------------|------|------|------------------|--|--|--|--|
| NAME: 99LED839W | | | | | TYPE: | | | | | WEIGHT: 1 | | | | |
| SPEC.: | | | | | DIM.: F90 | | | | | SERIAL No.: 0 | | | | |
| MFR.: Elmark Industries JSC | | | | | SUR.: round | | | | | Shielding Angle: | | | | |
| ceiling/cavity | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | | | | |
| walls | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | | | | |
| working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | | | |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | | | | |
| x = 2H y = 2H | 13.4 | 14.5 | 14.2 | 15.4 | 16.5 | 13.3 | 14.3 | 14.1 | 15.2 | 16.4 | | | | |
| 3H | 16.7 | 17.7 | 17.6 | 18.6 | 19.7 | 16.5 | 17.5 | 17.4 | 18.4 | 19.6 | | | | |
| 4H | 18.5 | 19.5 | 19.4 | 20.4 | 21.6 | 18.4 | 19.3 | 19.3 | 20.2 | 21.4 | | | | |
| 6H | 20.6 | 21.5 | 21.5 | 22.4 | 23.6 | 20.4 | 21.3 | 21.3 | 22.2 | 23.4 | | | | |
| 8H | 21.8 | 22.6 | 22.7 | 23.6 | 24.8 | 21.6 | 22.4 | 22.5 | 23.4 | 24.6 | | | | |
| 12H | 23.1 | 23.9 | 24.0 | 24.9 | 26.1 | 22.9 | 23.7 | 23.8 | 24.7 | 25.9 | | | | |
| 4H 2H | 14.3 | 15.3 | 15.2 | 16.2 | 17.4 | 14.3 | 15.2 | 15.1 | 16.1 | 17.3 | | | | |
| 3H | 17.8 | 18.6 | 18.7 | 19.5 | 20.7 | 17.6 | 18.4 | 18.5 | 19.4 | 20.6 | | | | |
| 4H | 19.7 | 20.5 | 20.7 | 21.4 | 22.7 | 19.6 | 20.3 | 20.5 | 21.3 | 22.5 | | | | |
| 6H | 22.0 | 22.6 | 22.9 | 23.6 | 24.9 | 21.8 | 22.5 | 22.8 | 23.4 | 24.7 | | | | |
| 8H | 23.2 | 23.8 | 24.2 | 24.8 | 26.1 | 23.0 | 23.7 | 24.0 | 24.6 | 25.9 | | | | |
| 12H | 24.7 | 25.2 | 25.6 | 26.2 | 27.5 | 24.5 | 25.0 | 25.4 | 26.0 | 27.3 | | | | |
| 8H 4H | 20.4 | 21.0 | 21.4 | 22.0 | 23.3 | 20.3 | 20.9 | 21.3 | 21.9 | 23.2 | | | | |
| 6H | 22.9 | 23.4 | 23.9 | 24.4 | 25.7 | 22.8 | 23.3 | 23.8 | 24.3 | 25.6 | | | | |
| 8H | 24.3 | 24.8 | 25.3 | 25.8 | 27.2 | 24.2 | 24.7 | 25.2 | 25.7 | 27.0 | | | | |
| 12H | 26.0 | 26.4 | 27.0 | 27.4 | 28.8 | 25.8 | 26.2 | 26.8 | 27.3 | 28.6 | | | | |
| 12H 4H | 20.6 | 21.2 | 21.6 | 22.2 | 23.5 | 20.5 | 21.1 | 21.5 | 22.1 | 23.4 | | | | |
| 6H | 23.2 | 23.7 | 24.2 | 24.7 | 26.0 | 23.1 | 23.6 | 24.1 | 24.6 | 25.9 | | | | |
| 8H | 24.8 | 25.2 | 25.8 | 26.2 | 27.5 | 24.6 | 25.0 | 25.6 | 26.1 | 27.4 | | | | |
| Variations with the observer position at spacings(CIE Pub.117): | | | | | | | | | | | | | | |
| S = 1.0H | + 0.1 / - 0.1 | | | | | + 0.1 / - 0.1 | | | | | | | | |
| 1.5H | + 0.2 / - 0.3 | | | | | + 0.2 / - 0.3 | | | | | | | | |
| 2.0H | + 0.3 / - 0.4 | | | | | + 0.3 / - 0.4 | | | | | | | | |

CIE Pub.117, 1521 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.5)
Area: 0.0510446 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

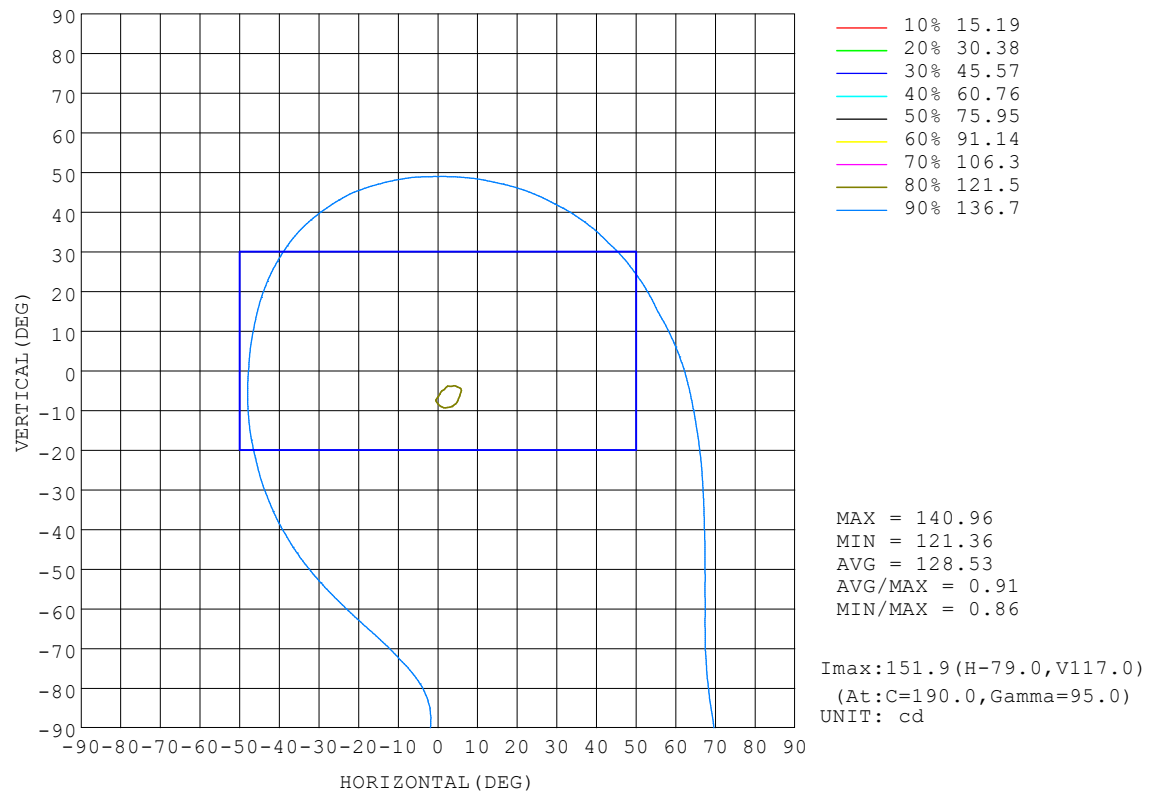
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|------------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0 |
| ROOM INDEX | UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 40 | 27 | 19 | 38 | 25 | 18 | 34 | 23 | 17 | 9 |
| 0.80 | 50 | 35 | 26 | 47 | 33 | 24 | 41 | 30 | 22 | 12 |
| 1.00 | 58 | 42 | 32 | 54 | 40 | 31 | 47 | 38 | 28 | 15 |
| 1.25 | 65 | 50 | 39 | 61 | 47 | 37 | 52 | 41 | 33 | 19 |
| 1.50 | 71 | 56 | 45 | 66 | 52 | 43 | 57 | 46 | 38 | 21 |
| 2.00 | 79 | 65 | 55 | 73 | 61 | 52 | 63 | 53 | 45 | 26 |
| 2.50 | 85 | 72 | 62 | 78 | 67 | 58 | 67 | 58 | 50 | 29 |
| 3.00 | 89 | 77 | 68 | 82 | 72 | 63 | 70 | 62 | 55 | 31 |
| 4.00 | 95 | 85 | 76 | 88 | 78 | 71 | 74 | 67 | 61 | 35 |
| 5.00 | 99 | 90 | 82 | 91 | 83 | 76 | 77 | 71 | 65 | 38 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | | SHRNOM = 1.25 | | |

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

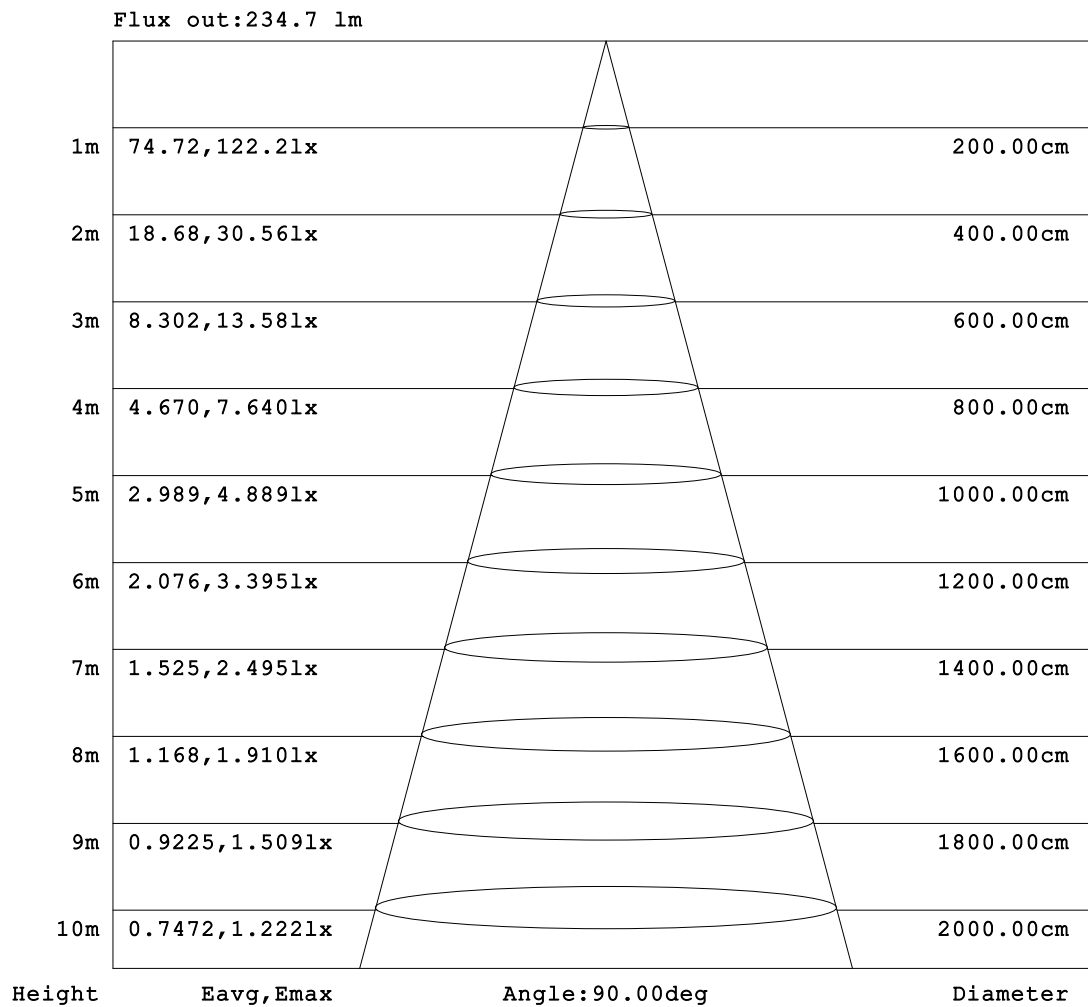


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity:65.0%
 Test Distance:6.265m [K=1.0000]
 Remarks:

AAI Figure

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature: 25.3°C

Operators:

Test Date: 21 October 2022

γ Range: 0 - 180DEG

γ Interval: 2.5DEG

Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456

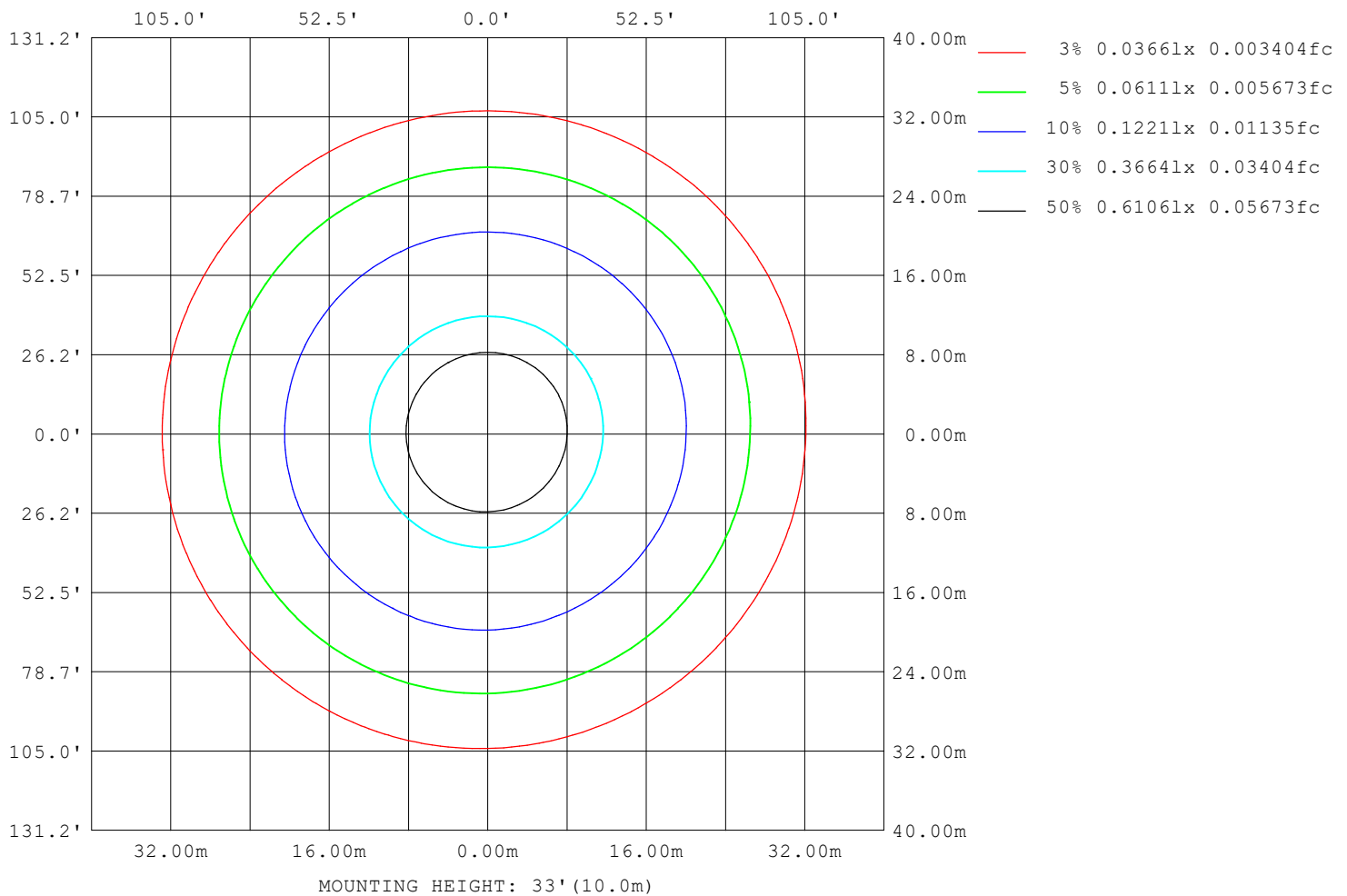
Humidity: 65.0%

Test Distance: 6.265m [K=1.0000]

Remarks:

ISOLUX DIAGRAM

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

LED Avg.L Report

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

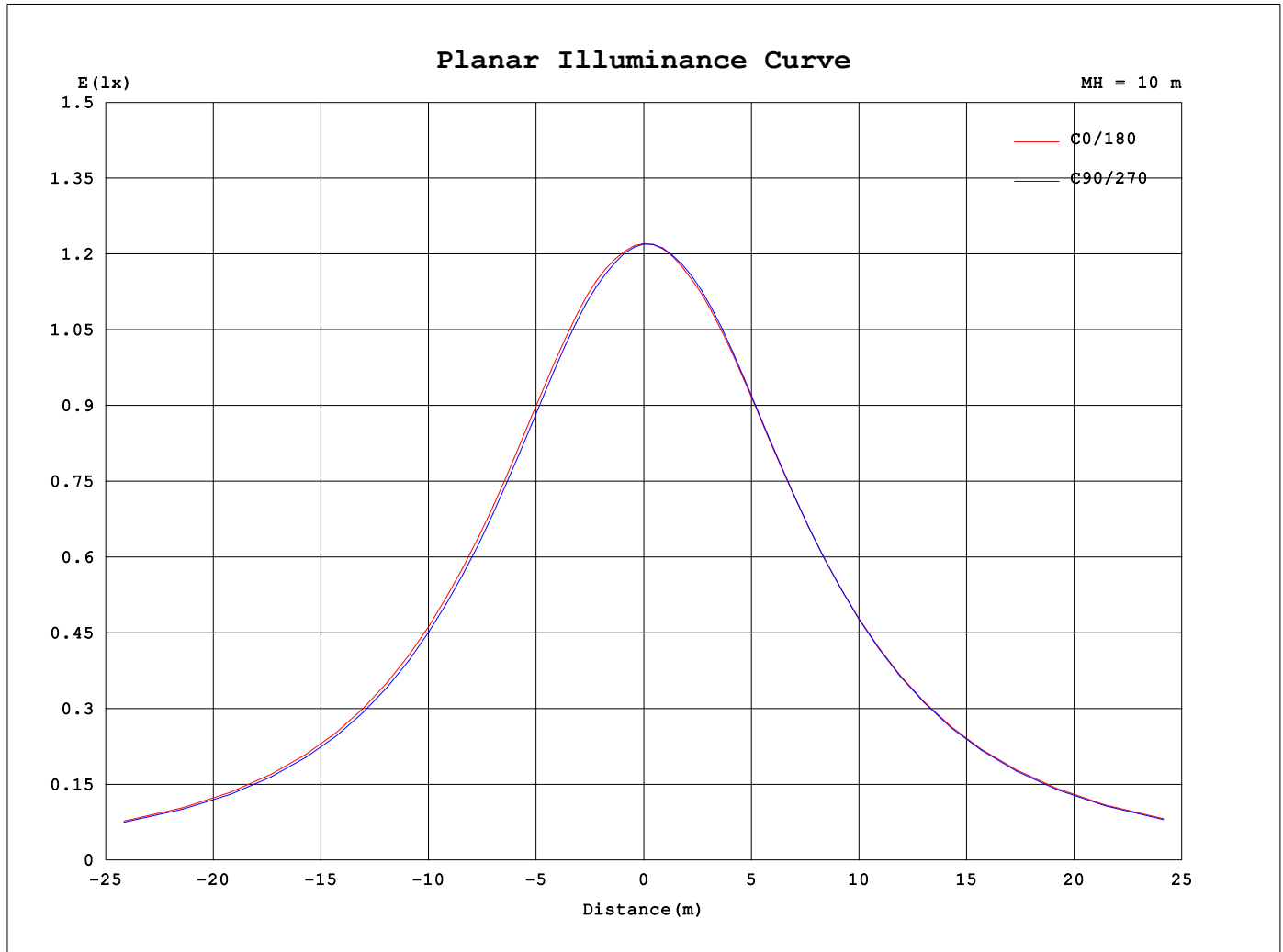
| AvgL | cd/m2 |
|------------------|-------|
| L_0~180 (65) av | 6552 |
| L_0~180 (75) av | 10923 |
| L_0~180 (85) av | 32782 |
| L_90~270 (65) av | 6411 |
| L_90~270 (75) av | 10644 |
| L_90~270 (85) av | 31861 |
| L_45 (65) av | 6482 |
| L_45 (75) av | 10787 |
| L_45 (85) av | 32335 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

Table--1

UNIT: cd

| C (DEG) γ (DEG) | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| 5 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| 10 | 123 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 123 | 123 | 123 |
| 15 | 124 | 123 | 123 | 123 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 123 | 123 | 123 | 123 | 124 | 124 | 124 | 124 |
| 20 | 124 | 124 | 124 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 124 | 124 | 124 | 125 | 125 | 126 | 126 | 126 |
| 25 | 125 | 125 | 124 | 124 | 123 | 123 | 123 | 123 | 123 | 123 | 124 | 124 | 125 | 125 | 126 | 126 | 127 | 127 | 128 |
| 30 | 126 | 126 | 125 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 125 | 125 | 126 | 127 | 127 | 128 | 128 | 129 | 129 |
| 35 | 127 | 126 | 126 | 125 | 125 | 124 | 124 | 124 | 124 | 125 | 126 | 126 | 127 | 128 | 129 | 129 | 130 | 130 | 131 |
| 40 | 129 | 128 | 127 | 126 | 126 | 125 | 125 | 125 | 126 | 126 | 127 | 128 | 129 | 130 | 130 | 131 | 132 | 132 | 133 |
| 45 | 131 | 130 | 129 | 128 | 127 | 127 | 126 | 126 | 127 | 128 | 128 | 129 | 131 | 132 | 133 | 133 | 134 | 135 | 135 |
| 50 | 132 | 131 | 130 | 129 | 128 | 128 | 128 | 128 | 128 | 129 | 130 | 131 | 132 | 134 | 135 | 136 | 137 | 137 | 138 |
| 55 | 134 | 133 | 132 | 130 | 130 | 129 | 129 | 129 | 130 | 131 | 132 | 133 | 134 | 136 | 137 | 138 | 139 | 140 | 140 |
| 60 | 136 | 134 | 133 | 132 | 131 | 130 | 130 | 130 | 131 | 132 | 133 | 135 | 136 | 138 | 139 | 140 | 141 | 142 | 143 |
| 65 | 137 | 136 | 134 | 133 | 132 | 132 | 131 | 132 | 132 | 133 | 135 | 136 | 138 | 140 | 141 | 143 | 144 | 144 | 145 |
| 70 | 139 | 137 | 135 | 134 | 133 | 133 | 132 | 133 | 133 | 135 | 136 | 138 | 140 | 141 | 143 | 144 | 146 | 146 | 147 |
| 75 | 140 | 138 | 136 | 135 | 134 | 133 | 133 | 133 | 134 | 135 | 137 | 139 | 141 | 143 | 145 | 146 | 147 | 148 | 149 |
| 80 | 140 | 138 | 137 | 135 | 134 | 134 | 133 | 134 | 135 | 136 | 138 | 140 | 142 | 144 | 146 | 147 | 148 | 149 | 150 |
| 85 | 140 | 139 | 137 | 136 | 134 | 134 | 134 | 134 | 135 | 136 | 138 | 140 | 143 | 145 | 147 | 148 | 149 | 150 | 151 |
| 90 | 140 | 139 | 137 | 135 | 134 | 134 | 133 | 134 | 135 | 136 | 138 | 141 | 143 | 145 | 147 | 149 | 150 | 151 | 152 |
| 95 | 140 | 138 | 136 | 135 | 134 | 133 | 133 | 134 | 135 | 136 | 138 | 141 | 143 | 145 | 147 | 149 | 150 | 151 | 152 |
| 100 | 139 | 137 | 136 | 134 | 133 | 132 | 132 | 133 | 134 | 136 | 138 | 140 | 142 | 145 | 147 | 148 | 150 | 150 | 151 |
| 105 | 138 | 136 | 134 | 133 | 132 | 131 | 131 | 132 | 133 | 135 | 137 | 139 | 141 | 144 | 146 | 148 | 149 | 150 | 150 |
| 110 | 136 | 134 | 133 | 132 | 131 | 130 | 130 | 131 | 132 | 134 | 136 | 138 | 140 | 142 | 144 | 146 | 147 | 148 | 149 |
| 115 | 134 | 133 | 131 | 130 | 129 | 129 | 129 | 129 | 131 | 132 | 134 | 136 | 139 | 141 | 143 | 144 | 145 | 146 | 147 |
| 120 | 132 | 130 | 129 | 128 | 127 | 127 | 127 | 128 | 129 | 130 | 132 | 134 | 137 | 139 | 140 | 142 | 143 | 144 | 145 |
| 125 | 129 | 128 | 127 | 126 | 125 | 125 | 125 | 126 | 127 | 128 | 130 | 132 | 134 | 136 | 138 | 140 | 141 | 141 | 142 |
| 130 | 126 | 125 | 124 | 123 | 123 | 123 | 123 | 124 | 125 | 126 | 128 | 130 | 132 | 133 | 135 | 136 | 137 | 138 | 139 |
| 135 | 123 | 122 | 121 | 120 | 120 | 120 | 120 | 121 | 122 | 124 | 125 | 127 | 129 | 130 | 132 | 133 | 134 | 135 | 136 |
| 140 | 119 | 118 | 117 | 117 | 116 | 117 | 117 | 118 | 119 | 121 | 122 | 124 | 125 | 127 | 128 | 129 | 130 | 131 | 132 |
| 145 | 112 | 112 | 111 | 111 | 111 | 111 | 112 | 113 | 115 | 116 | 117 | 119 | 120 | 122 | 123 | 124 | 125 | 126 | 127 |
| 150 | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 105 | 107 | 109 | 110 | 112 | 113 | 115 | 116 | 117 | 118 | 119 | 119 |
| 155 | 92.0 | 92.1 | 92.2 | 92.3 | 92.1 | 92.0 | 91.8 | 94.3 | 96.5 | 99.0 | 101 | 102 | 104 | 105 | 107 | 108 | 108 | 109 | 110 |
| 160 | 78.7 | 78.8 | 79.0 | 79.2 | 78.8 | 78.8 | 78.9 | 80.6 | 83.8 | 86.4 | 88.9 | 90.6 | 91.7 | 93.6 | 95.0 | 96.3 | 97.0 | 97.7 | 98.4 |
| 165 | 63.2 | 63.1 | 62.7 | 63.0 | 62.9 | 63.4 | 64.0 | 65.6 | 68.6 | 71.9 | 74.3 | 76.6 | 78.2 | 79.9 | 81.2 | 82.6 | 83.3 | 84.1 | 84.8 |
| 170 | 45.4 | 45.1 | 44.5 | 44.7 | 44.8 | 45.7 | 46.6 | 48.2 | 50.8 | 54.4 | 56.7 | 59.3 | 61.0 | 62.7 | 63.8 | 65.2 | 65.7 | 66.5 | 67.2 |
| 175 | 17.9 | 17.6 | 17.3 | 17.8 | 18.1 | 19.5 | 21.5 | 24.3 | 27.0 | 29.3 | 30.9 | 33.1 | 34.4 | 36.0 | 37.0 | 38.2 | 38.6 | 39.4 | 37.2 |
| 180 | 1.61 | 1.61 | 1.62 | 1.62 | 1.63 | 1.63 | 1.65 | 1.65 | 1.65 | 1.65 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.65 | 1.62 |

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:21 October 2022

γ Range: 0 - 180DEG

γ Interval: 2.5DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456

Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|-----------------------------|-------------|------------------|
| NAME: 99LED839W | TYPE: | WEIGHT: 1 |
| SPEC.: | DIM.: F90 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: round | Shielding Angle: |

Table--2

UNIT: cd

| C (DEG) γ (DEG) | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | | |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|--|
| 0 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | | |
| 5 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 122 | 122 | 122 | 122 | 122 | 122 | | |
| 10 | 123 | 123 | 123 | 123 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 123 | 123 | 123 | 123 | 123 | | |
| 15 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 124 | 124 | | |
| 20 | 126 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 126 | 126 | 126 | 126 | 125 | 125 | | |
| 25 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 127 | 127 | 127 | 126 | 126 | | |
| 30 | 129 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 129 | 129 | 129 | 129 | 128 | 128 | 127 | | |
| 35 | 131 | 131 | 132 | 132 | 132 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 130 | 130 | 129 | 128 | | |
| 40 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 132 | 132 | 132 | 131 | 130 | |
| 45 | 136 | 136 | 136 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 135 | 134 | 134 | 133 | 132 | | |
| 50 | 138 | 138 | 138 | 138 | 138 | 137 | 137 | 137 | 137 | 137 | 137 | 137 | 137 | 136 | 136 | 135 | 134 | | |
| 55 | 141 | 141 | 140 | 140 | 140 | 140 | 139 | 139 | 139 | 139 | 139 | 139 | 139 | 139 | 138 | 137 | 136 | | |
| 60 | 143 | 143 | 143 | 142 | 142 | 142 | 142 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 140 | 139 | 138 | | |
| 65 | 145 | 145 | 145 | 144 | 144 | 144 | 143 | 143 | 143 | 143 | 143 | 143 | 143 | 142 | 142 | 141 | 139 | | |
| 70 | 147 | 147 | 147 | 146 | 146 | 145 | 145 | 145 | 145 | 145 | 145 | 144 | 144 | 144 | 143 | 142 | 141 | | |
| 75 | 149 | 149 | 148 | 148 | 147 | 147 | 146 | 146 | 146 | 146 | 146 | 146 | 146 | 145 | 144 | 143 | 142 | | |
| 80 | 150 | 150 | 150 | 149 | 148 | 148 | 147 | 147 | 147 | 147 | 147 | 146 | 146 | 146 | 145 | 144 | 142 | | |
| 85 | 151 | 151 | 150 | 150 | 149 | 148 | 148 | 147 | 147 | 147 | 147 | 147 | 147 | 146 | 145 | 144 | 142 | | |
| 90 | 152 | 151 | 151 | 150 | 149 | 149 | 148 | 148 | 147 | 147 | 147 | 147 | 146 | 146 | 145 | 144 | 142 | | |
| 95 | 152 | 152 | 151 | 150 | 149 | 149 | 148 | 147 | 147 | 147 | 147 | 146 | 146 | 145 | 144 | 143 | 142 | | |
| 100 | 151 | 151 | 151 | 150 | 149 | 148 | 147 | 147 | 146 | 146 | 146 | 146 | 145 | 144 | 143 | 142 | 141 | | |
| 105 | 151 | 150 | 150 | 149 | 148 | 147 | 147 | 146 | 145 | 145 | 145 | 144 | 144 | 143 | 142 | 141 | 140 | | |
| 110 | 149 | 149 | 148 | 148 | 147 | 146 | 145 | 144 | 144 | 143 | 143 | 143 | 142 | 141 | 140 | 139 | 138 | | |
| 115 | 147 | 147 | 147 | 146 | 145 | 144 | 143 | 143 | 142 | 142 | 141 | 140 | 140 | 139 | 138 | 137 | 136 | | |
| 120 | 145 | 145 | 144 | 144 | 143 | 142 | 141 | 141 | 140 | 139 | 139 | 138 | 137 | 136 | 136 | 134 | 133 | | |
| 125 | 142 | 142 | 142 | 141 | 140 | 140 | 139 | 138 | 137 | 137 | 136 | 135 | 134 | 134 | 133 | 132 | 131 | | |
| 130 | 139 | 139 | 139 | 138 | 138 | 137 | 136 | 135 | 134 | 134 | 133 | 132 | 131 | 130 | 130 | 129 | 127 | | |
| 135 | 136 | 136 | 135 | 135 | 134 | 134 | 133 | 132 | 131 | 130 | 130 | 129 | 128 | 127 | 126 | 125 | 124 | | |
| 140 | 132 | 132 | 132 | 131 | 131 | 130 | 129 | 128 | 128 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | | |
| 145 | 127 | 127 | 127 | 126 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | | |
| 150 | 120 | 120 | 119 | 119 | 119 | 118 | 117 | 116 | 115 | 114 | 112 | 111 | 109 | 108 | 107 | 106 | 104 | | |
| 155 | 110 | 110 | 110 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 102 | 101 | 99.2 | 98.0 | 96.6 | 94.4 | 92.8 | | |
| 160 | 98.5 | 98.7 | 98.4 | 98.2 | 97.4 | 96.5 | 95.1 | 94.5 | 93.1 | 91.8 | 90.2 | 88.8 | 87.2 | 85.7 | 83.0 | 80.6 | 79.7 | | |
| 165 | 84.9 | 85.1 | 84.7 | 84.0 | 83.2 | 82.2 | 80.7 | 79.7 | 78.3 | 77.2 | 75.5 | 74.1 | 72.3 | 70.0 | 66.9 | 64.3 | 62.9 | | |
| 170 | 67.1 | 66.8 | 65.8 | 65.1 | 64.5 | 64.0 | 63.0 | 62.1 | 60.8 | 59.5 | 57.8 | 56.3 | 54.1 | 51.9 | 49.3 | 47.4 | 44.9 | | |
| 175 | 37.6 | 38.1 | 37.7 | 37.6 | 36.8 | 36.4 | 35.1 | 34.3 | 32.5 | 31.4 | 29.7 | 28.6 | 27.0 | 26.2 | 24.8 | 22.8 | 20.3 | | |
| 180 | 1.62 | 1.63 | 1.64 | 1.64 | 1.65 | 1.64 | 1.65 | 1.65 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.65 | 1.64 | | |

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:21 October 2022

γ Range: 0 - 180DEG

γ Interval: 2.5DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456

Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks: