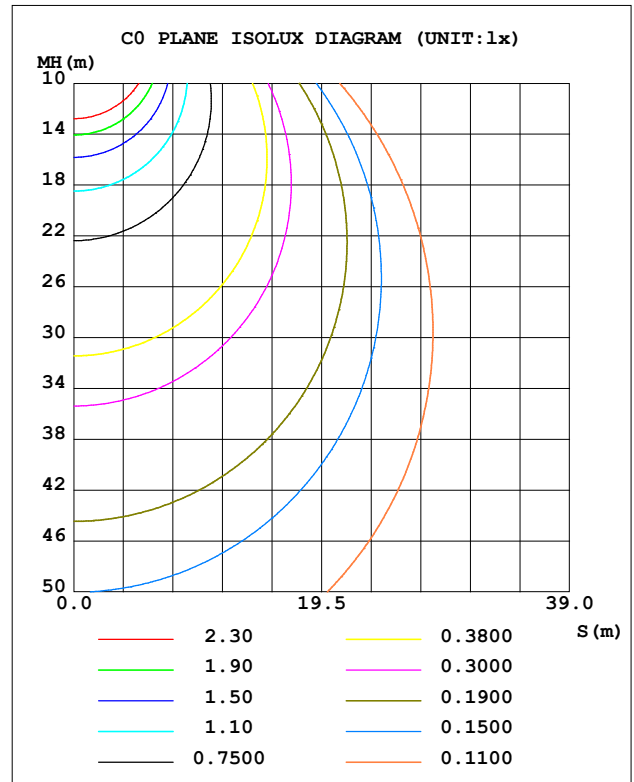
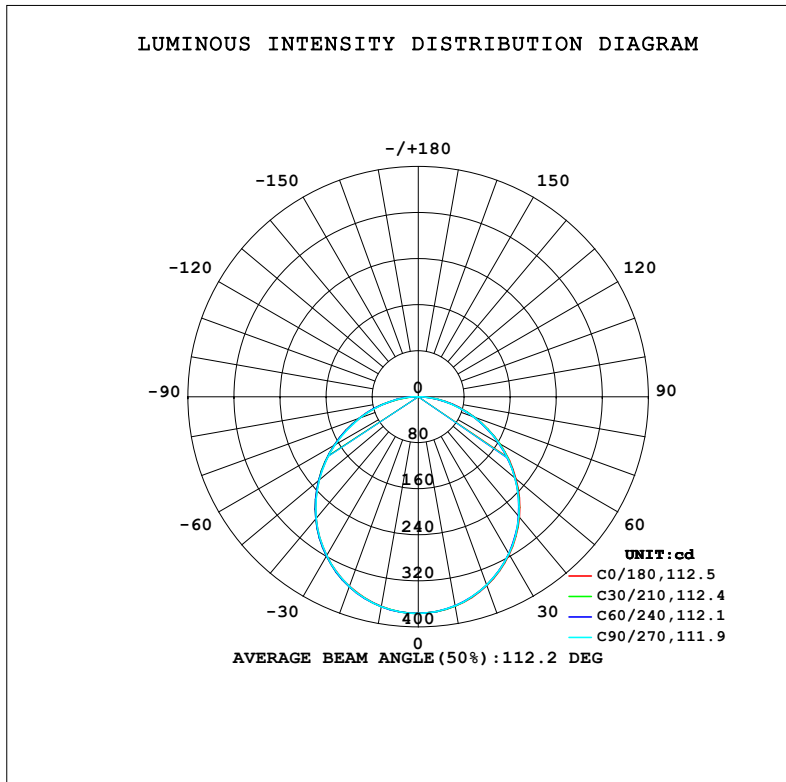


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|-----------------------------|------------------|------------------|
| NAME: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |

| DATA OF LAMP | | PHOTOMETRIC DATA | | | |
|-------------------|------------|-----------------------|--------|---------------------|-----------|
| MODEL | 99LED934/W | I _{max} (cd) | 376.4 | S/MH (C0/180) | 1.26 |
| NOMINAL POWER (W) | 15 | LOR (%) | 108.4 | S/MH (C90/270) | 1.26 |
| RATED VOLTAGE (V) | 230 | TOTAL FLUX (lm) | 1083.9 | η UP, DN (C0-180) | 0.0, 53.8 |
| NOMINAL FLUX (lm) | 1000 | CIE CLASS | DIRECT | η UP, DN (C180-360) | 0.0, 54.6 |
| LAMPS INSIDE | 1 | η up (%) | 0.0 | CIBSE SHR NOM | 1.25 |
| TEST VOLTAGE (V) | 230 | η down (%) | 108.4 | CIBSE SHR MAX | 1.35 |



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 11 August 2022

γ Range: 0 - 90DEG
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 | 369.3 | 368.8 | 368.9 | 369.4 | 369.9 | 370.3 | 370.3 | 369.8 | 0- 10 | 35.61 | 35.61 | 3.28,3.56 |
| 20 | 348.9 | 347.9 | 348.0 | 349.2 | 350.4 | 351.0 | 350.7 | 349.8 | 10- 20 | 101.9 | 137.5 | 12.7,13.8 |
| 30 | 316.3 | 315.0 | 315.0 | 316.8 | 318.6 | 319.4 | 318.7 | 317.6 | 20- 30 | 154.3 | 291.8 | 26.9,29.2 |
| 40 | 273.3 | 271.6 | 271.5 | 273.9 | 276.3 | 277.1 | 276.0 | 274.7 | 30- 40 | 185.7 | 477.5 | 44.1,47.8 |
| 50 | 221.8 | 219.8 | 219.6 | 222.5 | 225.3 | 226.1 | 224.6 | 223.2 | 40- 50 | 192.4 | 669.9 | 61.8,67 |
| 60 | 164.2 | 162.2 | 162.0 | 165.2 | 168.3 | 168.9 | 167.1 | 165.7 | 50- 60 | 174.0 | 843.9 | 77.9,84.4 |
| 70 | 104.2 | 102.4 | 102.4 | 105.5 | 108.8 | 109.1 | 107.1 | 105.7 | 60- 70 | 134.2 | 978.2 | 90.2,97.8 |
| 80 | 46.83 | 45.70 | 45.93 | 48.74 | 51.25 | 51.72 | 49.99 | 48.42 | 70- 80 | 80.91 | 1059 | 97.7,106 |
| 90 | 0.6493 | 0.6480 | 0.6365 | 0.6410 | 0.7694 | 0.5731 | 0.5767 | 0.5662 | 80- 90 | 24.86 | 1084 | 100,108 |
| 100 | | | | | | | | | 90-100 | | | |
| 110 | | | | | | | | | 100-110 | | | |
| 120 | | | | | | | | | 110-120 | | | |
| 130 | | | | | | | | | 120-130 | | | |
| 140 | | | | | | | | | 130-140 | | | |
| 150 | | | | | | | | | 140-150 | | | |
| 160 | | | | | | | | | 150-160 | | | |
| 170 | | | | | | | | | 160-170 | | | |
| 180 | | | | | | | | | 170-180 | | | |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 574.48 lm

%lum = 53.0%
%lamp = 57.4%

Conical surface Flux(130deg): 917.1 lm

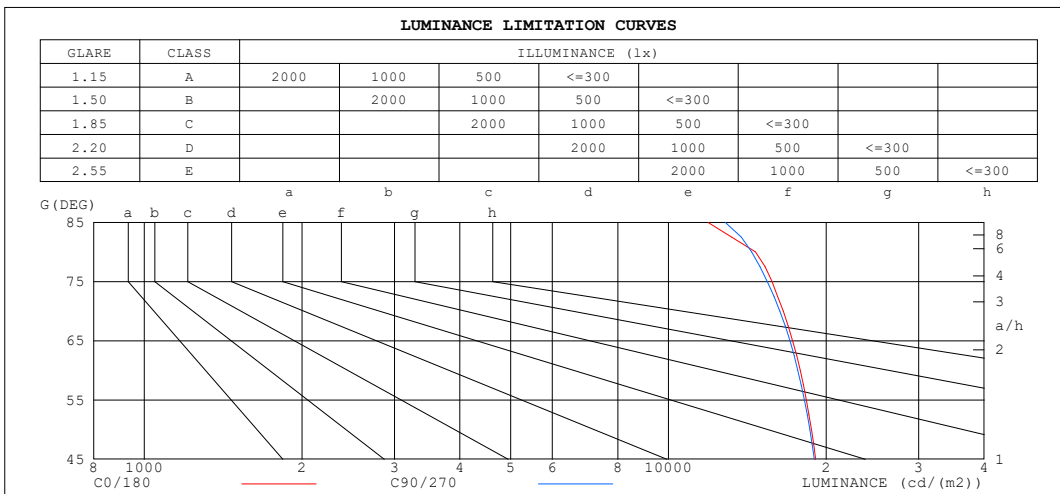
%lum = 84.6%
%lamp = 91.7%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:11 August 2022

γ Range: 0 - 90DEG
 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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 11 August 2022

γ Range: 0 - 90DEG
 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:

```

γ Range: 0 - 90DEG
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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | 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 | .343 | .195 | .062 | .335 | .191 | .061 | .321 | .184 | .059 | .308 | .177 | .057 | .295 | .171 | .055 | |
| 2.0 | .321 | .176 | .054 | .314 | .173 | .053 | .301 | .167 | .052 | .289 | .162 | .051 | .279 | .158 | .050 | |
| 3.0 | .296 | .157 | .047 | .290 | .155 | .047 | .279 | .151 | .046 | .268 | .147 | .045 | .258 | .143 | .044 | |
| 4.0 | .272 | .142 | .042 | .267 | .140 | .041 | .257 | .136 | .041 | .248 | .133 | .040 | .239 | .130 | .040 | |
| 5.0 | .251 | .128 | .037 | .247 | .127 | .037 | .238 | .124 | .036 | .230 | .121 | .036 | .222 | .119 | .036 | |
| 6.0 | .233 | .117 | .033 | .229 | .116 | .033 | .221 | .113 | .033 | .213 | .111 | .033 | .207 | .109 | .032 | |
| 7.0 | .217 | .107 | .030 | .213 | .106 | .030 | .206 | .104 | .030 | .199 | .102 | .030 | .193 | .100 | .029 | |
| 8.0 | .202 | .099 | .028 | .199 | .098 | .028 | .192 | .096 | .027 | .187 | .095 | .027 | .181 | .093 | .027 | |
| 9.0 | .189 | .092 | .026 | .186 | .091 | .025 | .181 | .089 | .025 | .175 | .088 | .025 | .170 | .087 | .025 | |
| 10.0 | .178 | .085 | .024 | .175 | .085 | .024 | .170 | .083 | .023 | .165 | .082 | .023 | .161 | .081 | .023 | |

| 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 | .206 | .206 | .206 | .176 | .176 | .176 | .120 | .120 | .120 | .069 | .069 | .069 | .022 | .022 | .022 | |
| 1.0 | .196 | .169 | .145 | .168 | .145 | .125 | .115 | .100 | .086 | .066 | .058 | .050 | .021 | .019 | .016 | |
| 2.0 | .187 | .143 | .106 | .160 | .123 | .091 | .110 | .085 | .064 | .063 | .050 | .037 | .020 | .016 | .012 | |
| 3.0 | .179 | .124 | .080 | .153 | .107 | .069 | .105 | .074 | .049 | .061 | .043 | .029 | .020 | .014 | .009 | |
| 4.0 | .171 | .110 | .063 | .146 | .095 | .055 | .101 | .066 | .038 | .058 | .039 | .023 | .019 | .013 | .007 | |
| 5.0 | .162 | .098 | .051 | .140 | .085 | .044 | .096 | .059 | .031 | .056 | .035 | .019 | .018 | .011 | .006 | |
| 6.0 | .155 | .089 | .042 | .133 | .077 | .037 | .092 | .054 | .026 | .053 | .032 | .015 | .017 | .010 | .005 | |
| 7.0 | .147 | .082 | .036 | .127 | .071 | .031 | .087 | .050 | .022 | .051 | .029 | .013 | .016 | .010 | .004 | |
| 8.0 | .140 | .075 | .031 | .121 | .065 | .027 | .083 | .046 | .019 | .049 | .027 | .011 | .016 | .009 | .004 | |
| 9.0 | .133 | .070 | .027 | .115 | .061 | .024 | .080 | .043 | .017 | .046 | .025 | .010 | .015 | .008 | .003 | |
| 10.0 | .127 | .065 | .024 | .110 | .057 | .021 | .076 | .040 | .015 | .044 | .024 | .009 | .014 | .008 | .003 | |

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:11 August 2022

γ Range: 0 - 90DEG
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: 99LED934/W | | | | | | TYPE: 99LED934/W | | | WEIGHT: 1 | | |
| SPEC.: | | | | | | DIM.: F 174 | | | SERIAL No.: 0 | | |
| MFR.: Elmark Industries JSC | | | | | | SUR.: circle | | | 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 | 22.9 | 24.4 | 23.2 | 24.6 | 24.9 | 22.9 | 24.4 | 23.1 | 24.6 | 24.8 |
| | 3H | 24.5 | 25.9 | 24.8 | 26.1 | 26.4 | 24.4 | 25.8 | 24.7 | 26.0 | 26.3 |
| | 4H | 25.1 | 26.5 | 25.4 | 26.7 | 27.0 | 25.0 | 26.4 | 25.3 | 26.6 | 26.9 |
| | 6H | 25.6 | 26.9 | 25.9 | 27.1 | 27.4 | 25.5 | 26.8 | 25.8 | 27.0 | 27.3 |
| | 8H | 25.8 | 27.0 | 26.1 | 27.3 | 27.6 | 25.7 | 26.9 | 26.0 | 27.2 | 27.5 |
| | 12H | 25.8 | 27.0 | 26.2 | 27.3 | 27.6 | 25.8 | 27.0 | 26.1 | 27.2 | 27.6 |
| 4H | 2H | 23.5 | 24.9 | 23.8 | 25.1 | 25.4 | 23.5 | 24.8 | 23.8 | 25.1 | 25.3 |
| | 3H | 25.3 | 26.4 | 25.6 | 26.7 | 27.0 | 25.2 | 26.4 | 25.5 | 26.7 | 27.0 |
| | 4H | 26.0 | 27.1 | 26.4 | 27.4 | 27.8 | 26.0 | 27.0 | 26.3 | 27.4 | 27.7 |
| | 6H | 26.7 | 27.6 | 27.1 | 28.0 | 28.3 | 26.6 | 27.5 | 27.0 | 27.9 | 28.2 |
| | 8H | 26.9 | 27.8 | 27.3 | 28.1 | 28.5 | 26.8 | 27.7 | 27.2 | 28.1 | 28.4 |
| | 12H | 27.0 | 27.8 | 27.4 | 28.2 | 28.6 | 26.9 | 27.8 | 27.4 | 28.1 | 28.6 |
| 8H | 4H | 26.3 | 27.2 | 26.7 | 27.6 | 28.0 | 26.2 | 27.1 | 26.7 | 27.5 | 27.9 |
| | 6H | 27.1 | 27.8 | 27.5 | 28.2 | 28.7 | 27.0 | 27.8 | 27.4 | 28.2 | 28.6 |
| | 8H | 27.4 | 28.1 | 27.9 | 28.5 | 28.9 | 27.3 | 28.0 | 27.8 | 28.4 | 28.9 |
| | 12H | 27.6 | 28.2 | 28.1 | 28.7 | 29.1 | 27.6 | 28.1 | 28.0 | 28.6 | 29.1 |
| 12H | 4H | 26.3 | 27.2 | 26.8 | 27.5 | 27.9 | 26.3 | 27.1 | 26.7 | 27.5 | 27.9 |
| | 6H | 27.2 | 27.8 | 27.6 | 28.2 | 28.7 | 27.1 | 27.7 | 27.5 | 28.2 | 28.6 |
| | 8H | 27.5 | 28.1 | 28.0 | 28.5 | 29.0 | 27.4 | 28.0 | 27.9 | 28.5 | 28.9 |
| Variations with the observer position at spacings(CIE Pub.117): | | | | | | | | | | | |
| S = 1.0H | | + 0.1 / - 0.2 | | | | | + 0.1 / - 0.2 | | | | |
| 1.5H | | + 0.2 / - 0.3 | | | | | + 0.2 / - 0.3 | | | | |
| 2.0H | | + 0.2 / - 0.3 | | | | | + 0.2 / - 0.3 | | | | |

CIE Pub.117, 1000 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.0)
Area: 0.018376 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:11 August 2022

γ Range: 0 - 90DEG
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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |

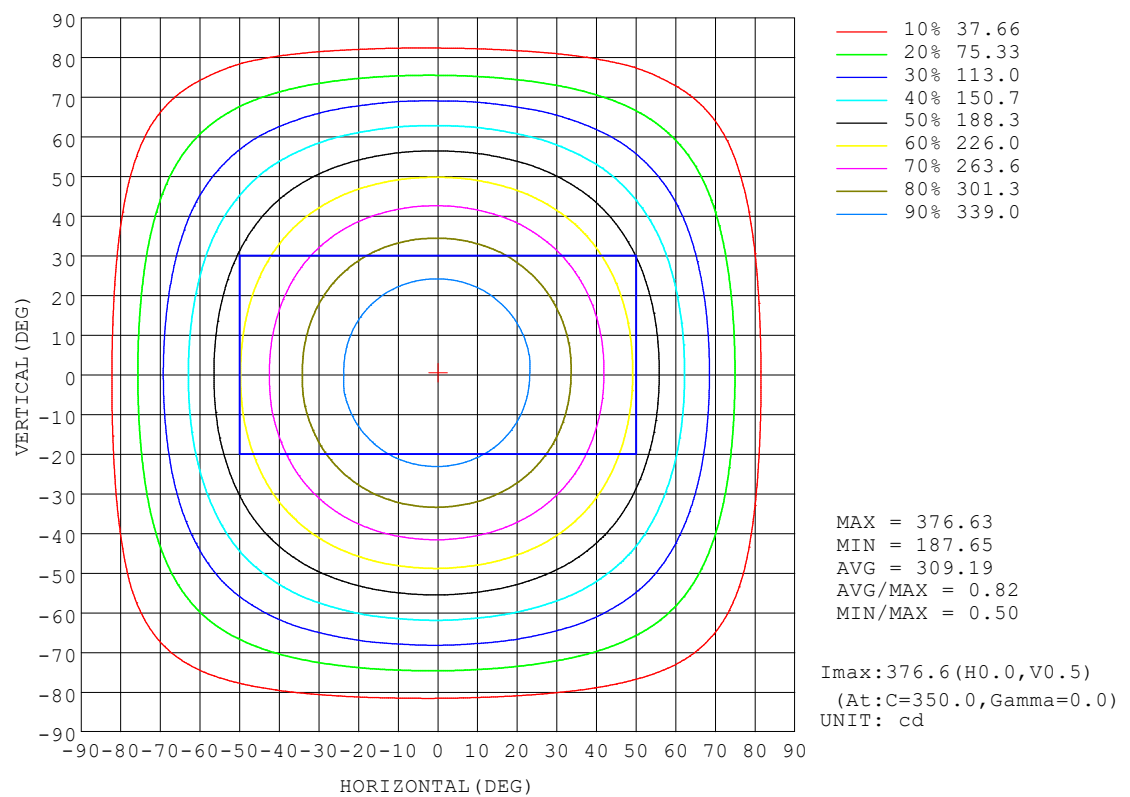
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|------------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 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) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 62 | 49 | 42 | 61 | 49 | 42 | 60 | 49 | 42 | 34 |
| 0.80 | 73 | 60 | 52 | 72 | 60 | 52 | 70 | 59 | 52 | 44 |
| 1.00 | 82 | 70 | 62 | 81 | 69 | 61 | 78 | 71 | 61 | 53 |
| 1.25 | 90 | 78 | 70 | 88 | 77 | 70 | 85 | 76 | 69 | 61 |
| 1.50 | 95 | 84 | 76 | 93 | 83 | 76 | 90 | 81 | 75 | 67 |
| 2.00 | 103 | 93 | 86 | 100 | 92 | 85 | 97 | 89 | 84 | 75 |
| 2.50 | 107 | 98 | 92 | 105 | 97 | 91 | 100 | 94 | 89 | 79 |
| 3.00 | 110 | 103 | 97 | 108 | 101 | 96 | 104 | 98 | 93 | 84 |
| 4.00 | 115 | 109 | 103 | 112 | 107 | 102 | 108 | 103 | 99 | 89 |
| 5.00 | 117 | 112 | 108 | 115 | 110 | 106 | 110 | 106 | 103 | 93 |
| 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: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 11 August 2022

γ Range: 0 - 90DEG
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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |

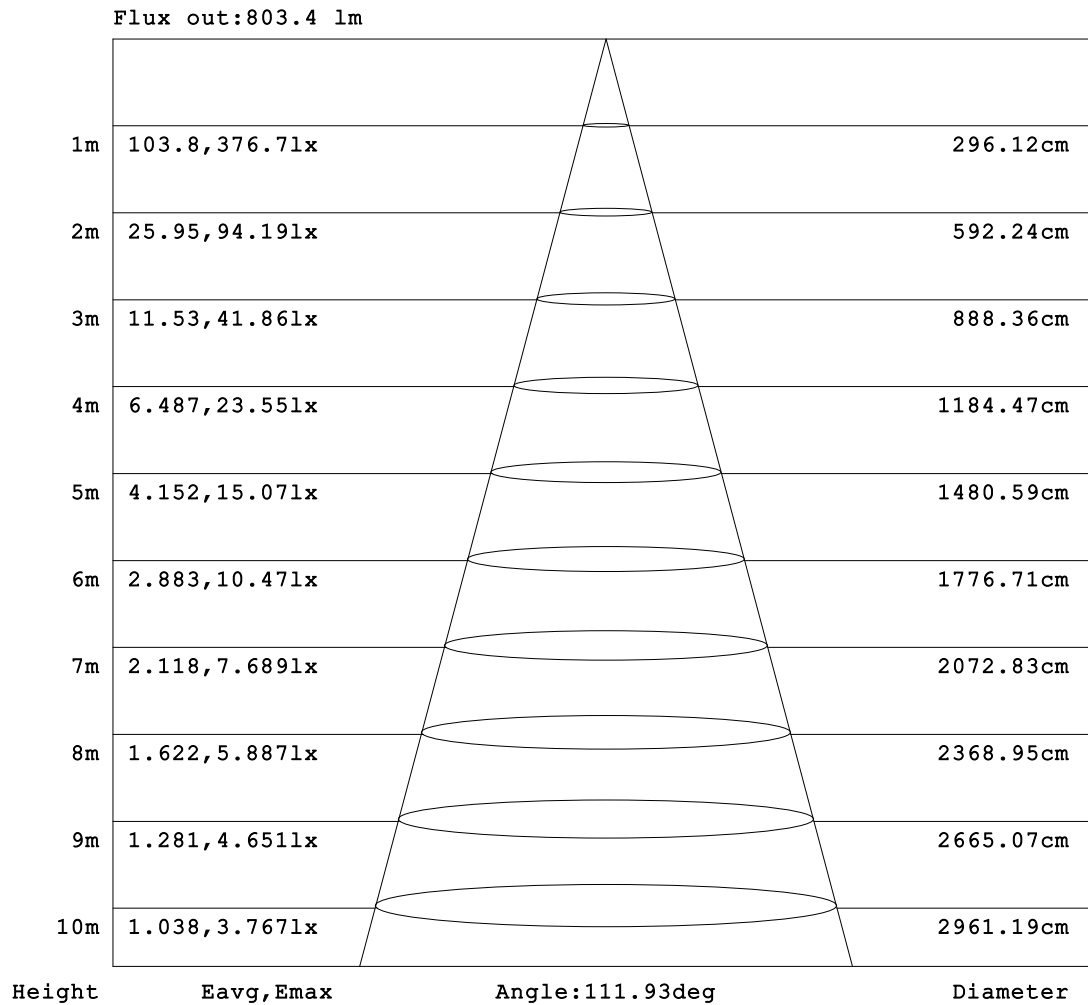


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 11 August 2022

γ Range: 0 - 90DEG
 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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |



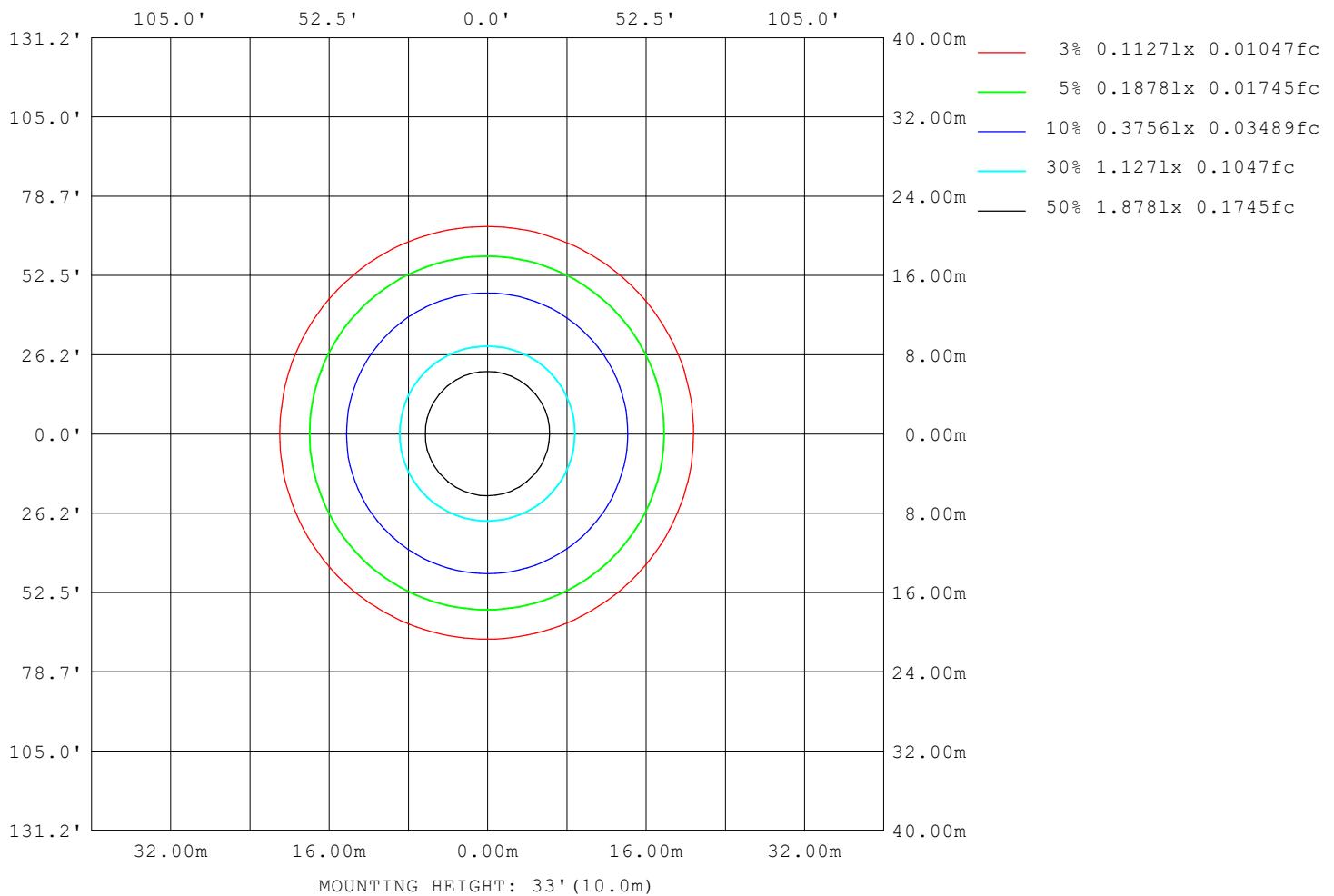
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 11 August 2022

γ Range: 0 - 90DEG
 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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 11 August 2022

γ Range: 0 - 90DEG
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: 99LED934/W | TYPE: 99LED934/W | WEIGHT: 1 |
| SPEC.: | DIM.: F 174 | SERIAL No.: 0 |
| MFR.: Elmark Industries JSC | SUR.: circle | Shielding Angle: |

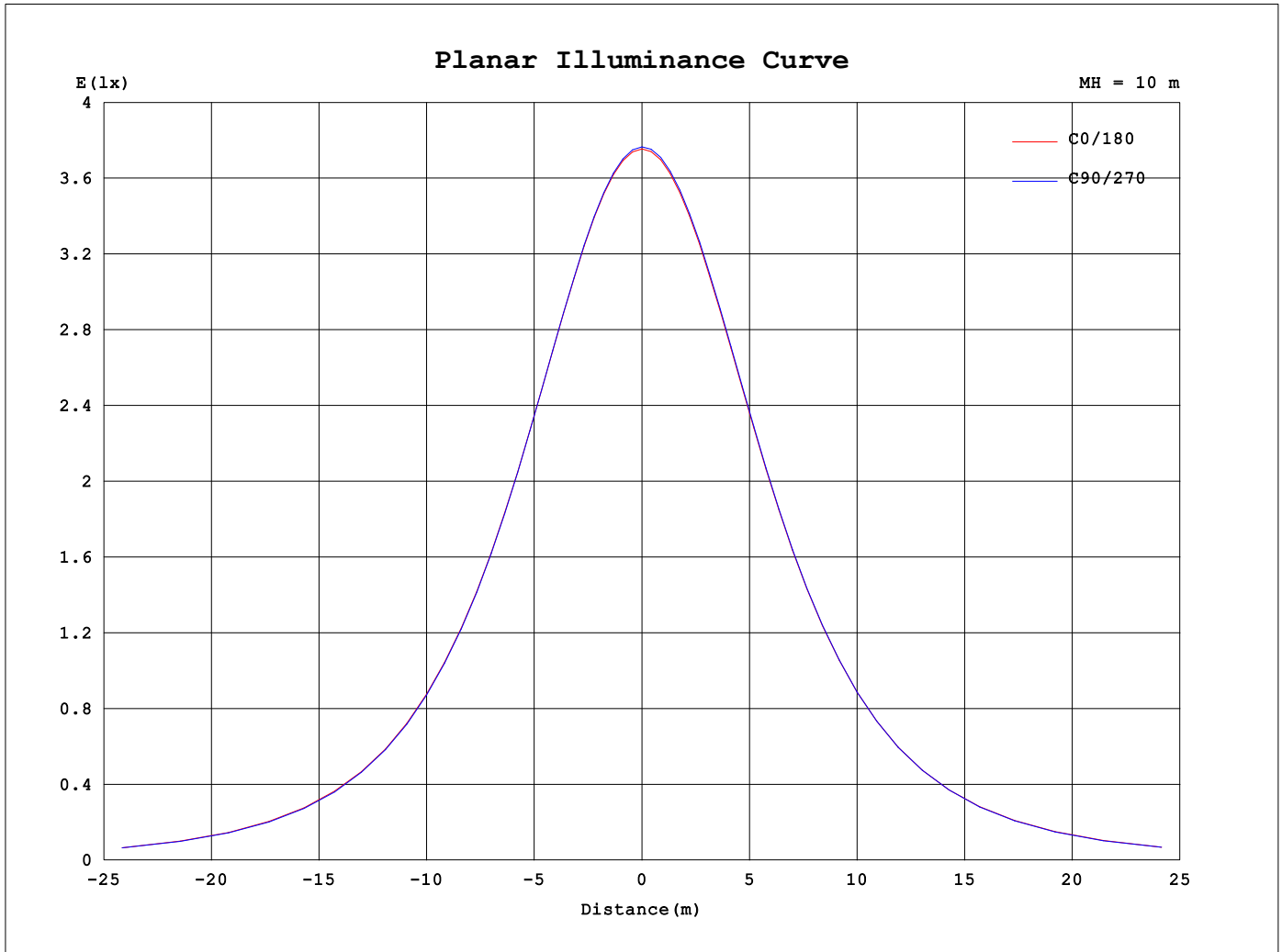
| AvgL | cd/m2 |
|------------------|-------|
| L_0~180 (65) av | 17577 |
| L_0~180 (75) av | 16253 |
| L_0~180 (85) av | 12949 |
| L_90~270 (65) av | 17344 |
| L_90~270 (75) av | 15903 |
| L_90~270 (85) av | 13898 |
| L_45 (65) av | 17471 |
| L_45 (75) av | 16089 |
| L_45 (85) av | 14318 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:11 August 2022

γ Range: 0 - 90DEG
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: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 11 August 2022

γ Range: 0 - 90DEG
 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:

```

γ Range: 0 - 90DEG
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:

```

```

γ Range: 0 - 90DEG
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:

```