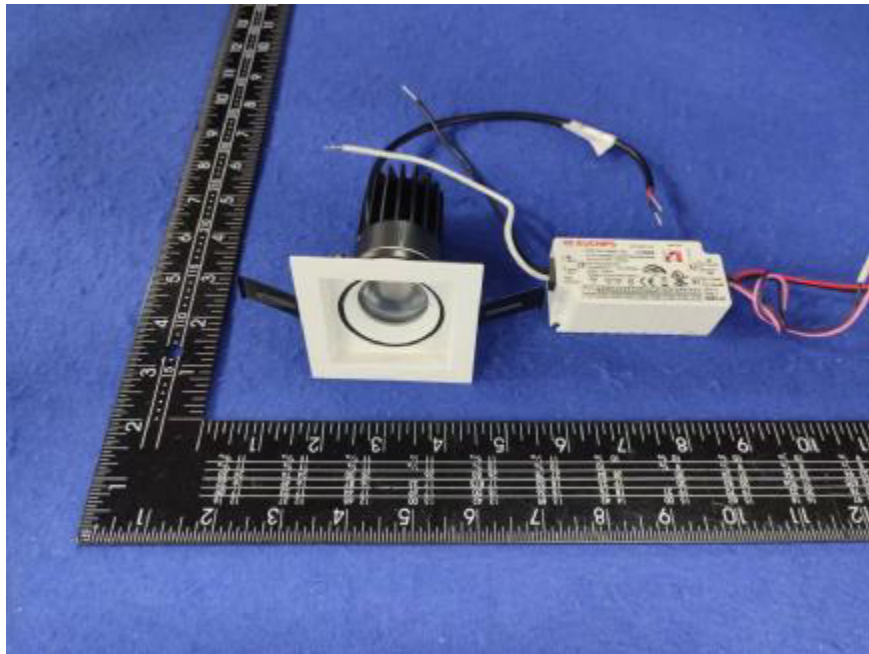


CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15

Photometric Report for each Light Engine used  
in single, double and triple configuration  
for Flanged and Flangeless Trim



|                     |         |                          |
|---------------------|---------|--------------------------|
| Light Output Ratio: | 63.7%   |                          |
| Luminaire Power:    | 11.38 W |                          |
| SHR Nominal:        | 0.00    | Calculated using the TM5 |
| SHR Maximum:        | 0.30    | fine grid method.        |

|                                          |                                                      |
|------------------------------------------|------------------------------------------------------|
| C Range: 0 - 360DEG                      | γ Range: 0 - 180DEG                                  |
| C Interval: For a lens beam angle of 15° | γ Interval: 1.0DEG                                   |
| Test Speed: HIGH                         | Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.461 |
| Temperature: 77.54°F                     | Humidity: 65.0%                                      |
| Operators: zoe                           | Test Distance: 124.409" [K=1.0000]                   |
| Test Date: 2023-12-28                    | Remarks: LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90        |
|                                          | LENS: PM-1103 15R+DIFFUSER                           |
|                                          | DRIVER: PUP10A-1WMC-700 500mA                        |
|                                          | 30minutes warm-up                                    |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

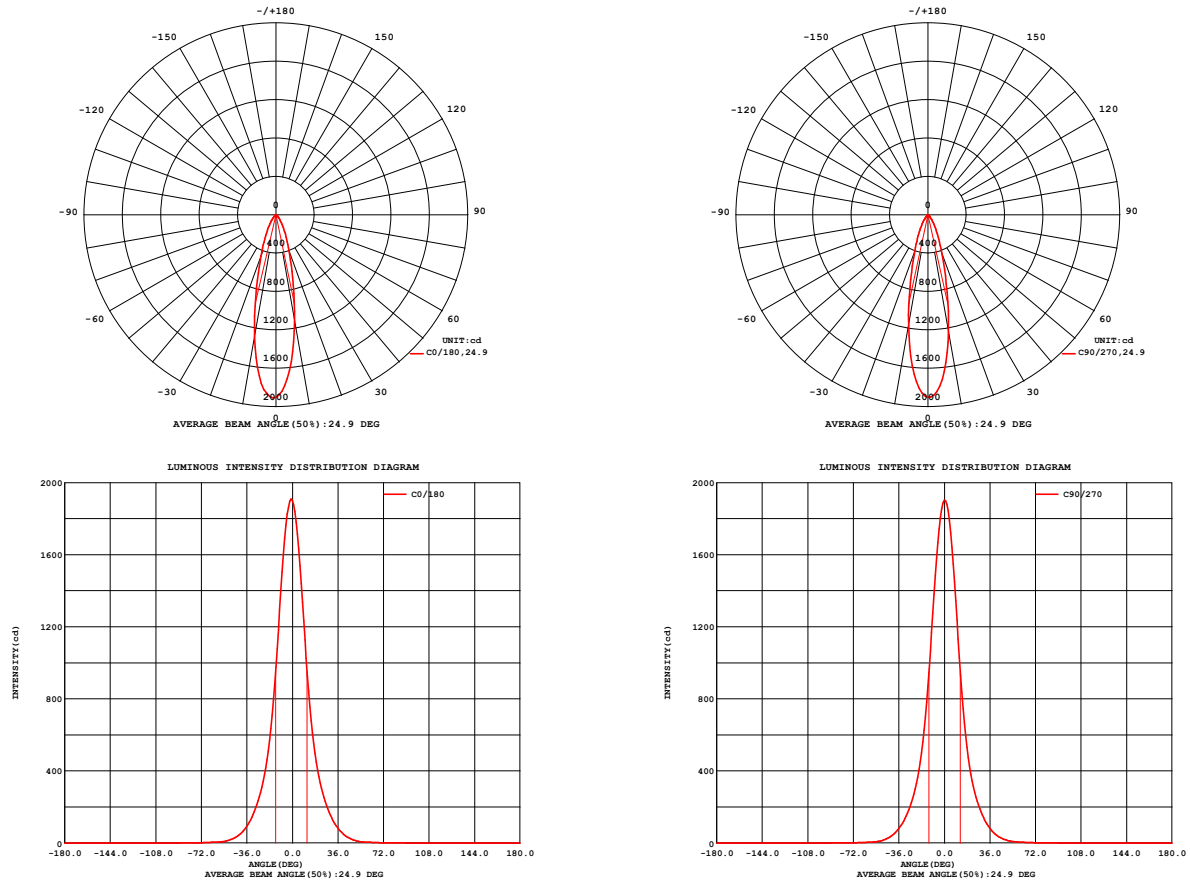


Fig. C0/C180

Fig. C90/C270

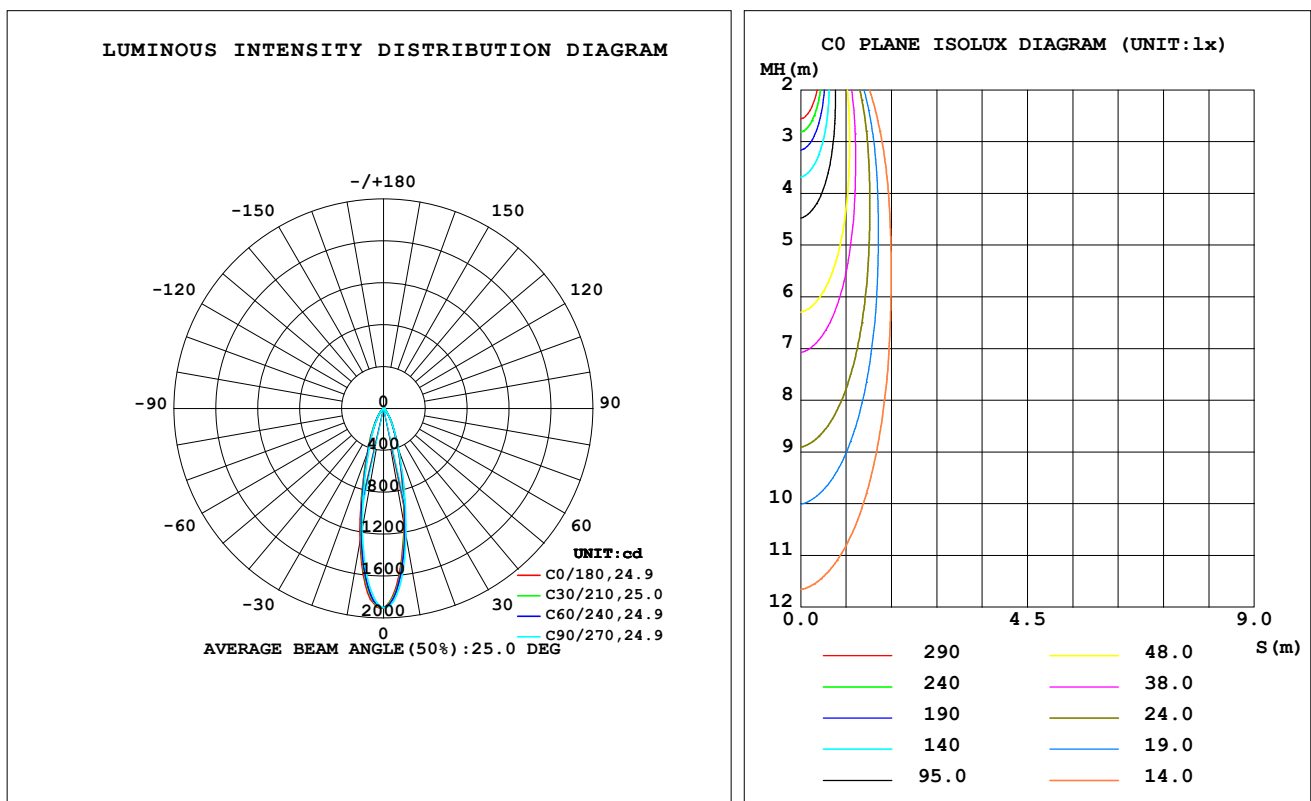
C Range: 0 - 360DEG  
C Interval: For a lens beam angle of 15°  
Test Speed: HIGH  
Temperature: 77.54°F  
Operators: zoe  
Test Date: 2023-12-28

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461  
Humidity: 65.0%  
Test Distance: 124.409" [K=1.0000]  
Remarks: LAMP: BXR-V-DR-1830G-100Z-A-23 Ra: 90  
LENS: PM-1103 15R+DIFFUSER  
DRIVER: PUP10A-1WMC-700 500mA  
30minutes warm-up

## LUMINAIRE PHOTOMETRIC TEST REPORT

|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | Shielding Angle:       |

| DATA OF LAMP     |           | PHOTOMETRIC DATA Eff: 49.81 lm/W |        |                   |          |
|------------------|-----------|----------------------------------|--------|-------------------|----------|
| MODEL            | Bridgelux | Imax(cd)                         | 1910   | S/MH(C0/180)      | 0.45     |
| NOMINAL POWER(W) | 11        | LOR(%)                           | 63.7   | S/MH(C90/270)     | 0.41     |
| RATED VOLTAGE(V) | 120       | TOTAL FLUX(lm)                   | 566.67 | ☒ UP,DN(C0-180)   | 0.0,32.0 |
| NOMINAL FLUX(lm) | 889.25    | CIE CLASS                        | DIRECT | ☒ UP,DN(C180-360) | 0.0,31.7 |
| LAMPS INSIDE     | 1         | ☒ up(%)                          | 0.0    | CIBSE SHR NOM     | 0.00     |
| TEST VOLTAGE(V)  | 120       | ☒ down(%)                        | 63.7   | CIBSE SHR MAX     | 0.30     |



C Range: 0 - 360DEG

C Interval: For a lens beam angle of 15°

Test Speed: HIGH

Temperature: 77.54°F

Operators: zoe

Test Date: 2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity: 65.0%

Test Distance: 124.409" [K=1.0000]

Remarks: LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90

LENS: PM-1103 15R+DIFFUSER

DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up

**ZONAL FLUX DIAGRAM**
**ZONAL FLUX DIAGRAM:**

| θ   | C0                    | C45    | C90    | C135   | C180   | C225   | C270   | C315   | φ       | zone    | total | %lum,lamp |
|-----|-----------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|-------|-----------|
| 10  | 1127                  | 1174   | 1238   | 1287   | 1292   | 1239   | 1170   | 1127   | 0- 10   | 145.7   | 145.7 | 25.7,16.4 |
| 20  | 406.0                 | 415.7  | 424.5  | 445.5  | 460.7  | 436.8  | 404.6  | 393.0  | 10- 20  | 203.1   | 348.8 | 61.6,39.2 |
| 30  | 155.2                 | 155.1  | 156.2  | 165.8  | 174.0  | 163.0  | 150.1  | 148.6  | 20- 30  | 120.8   | 469.6 | 82.9,52.8 |
| 40  | 52.02                 | 51.85  | 51.16  | 54.96  | 57.60  | 55.23  | 49.14  | 51.25  | 30- 40  | 60.40   | 530.0 | 93.5,59.6 |
| 50  | 12.60                 | 17.33  | 14.08  | 18.03  | 15.37  | 17.90  | 12.08  | 15.99  | 40- 50  | 23.61   | 553.6 | 97.7,62.3 |
| 60  | 4.268                 | 5.309  | 4.713  | 5.769  | 4.732  | 5.322  | 4.115  | 4.728  | 50- 60  | 8.110   | 561.7 | 99.1,63.2 |
| 70  | 1.393                 | 2.088  | 1.834  | 2.476  | 2.001  | 2.217  | 1.414  | 1.774  | 60- 70  | 3.364   | 565.1 | 99.7,63.5 |
| 80  | 0.5274                | 0.6362 | 0.5986 | 0.7444 | 0.5867 | 0.6290 | 0.4883 | 0.5571 | 70- 80  | 1.168   | 566.3 | 99.9,63.7 |
| 90  | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 80- 90  | 0.4128  | 566.7 | 100,63.7  |
| 100 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 90-100  | 0       | 566.7 | 100,63.7  |
| 110 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 100-110 | 0       | 566.7 | 100,63.7  |
| 120 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 110-120 | 0       | 566.7 | 100,63.7  |
| 130 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 120-130 | 0       | 566.7 | 100,63.7  |
| 140 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 130-140 | 0       | 566.7 | 100,63.7  |
| 150 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 140-150 | 0       | 566.7 | 100,63.7  |
| 160 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 150-160 | 0       | 566.7 | 100,63.7  |
| 170 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 160-170 | 0       | 566.7 | 100,63.7  |
| 180 | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 170-180 | 0       | 566.7 | 100,63.7  |
| DEG | LUMINOUS INTENSITY:cd |        |        |        |        |        |        |        |         | UNIT:lm |       |           |

C Range: 0 - 360DEG

C Interval:For a lens beam angle of 15°

Test Speed: HIGH

Temperature:77.54°F

Operators:zoe

Test Date:2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity:65.0%

Test Distance:124.409" [K=1.0000]

Remarks: LAMP:BXRV-DR-1830G-100Z-A-23 Ra:90

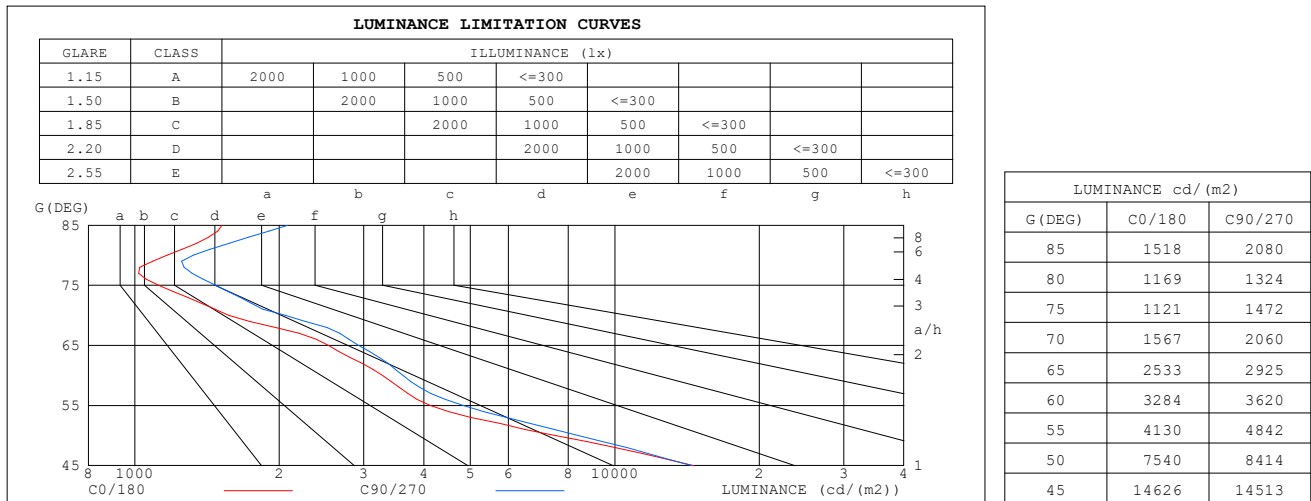
LENS:PM-1103 15R-DIFFUSER

DRIVER:PUP10A-1WMC-700 500mA

30minutes warm-up

**LUMINANCE LIMITATION CURVES**

|                                                                                                    |                         |                               |
|----------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|
| <b>Test:</b> U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br><b>Lamp Flux:</b> 889.25x1 lm |                         |                               |
| <b>NAME:</b> CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                                | <b>TYPE:</b>            | <b>WEIGHT:</b>                |
| <b>SPEC.:</b> 3000K                                                                                | <b>DIM.:</b>            | <b>SERIAL No.:</b> 2312281382 |
| <b>MFR.:</b> MERCURY LIGHTING                                                                      | <b>SUR.:</b> 0.002601m2 | <b>Shielding Angle:</b>       |


**C Range:** 0 - 360DEG

**C Interval:** For a lens beam angle of 15°

**Test Speed:** HIGH

**Temperature:** 77.54°F

**Operators:** zoe

**Test Date:** 2023-12-28

**γ Range:** 0 - 180DEG

**γ Interval:** 1.0DEG

**Test System:** EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

**Humidity:** 65.0%

**Test Distance:** 124.409" [K=1.0000]

**Remarks:** LAMP: BXRV-DR-1830G-100Z-A-23 Ra:90

LENS: PM-1103 15R+DIFFUSER

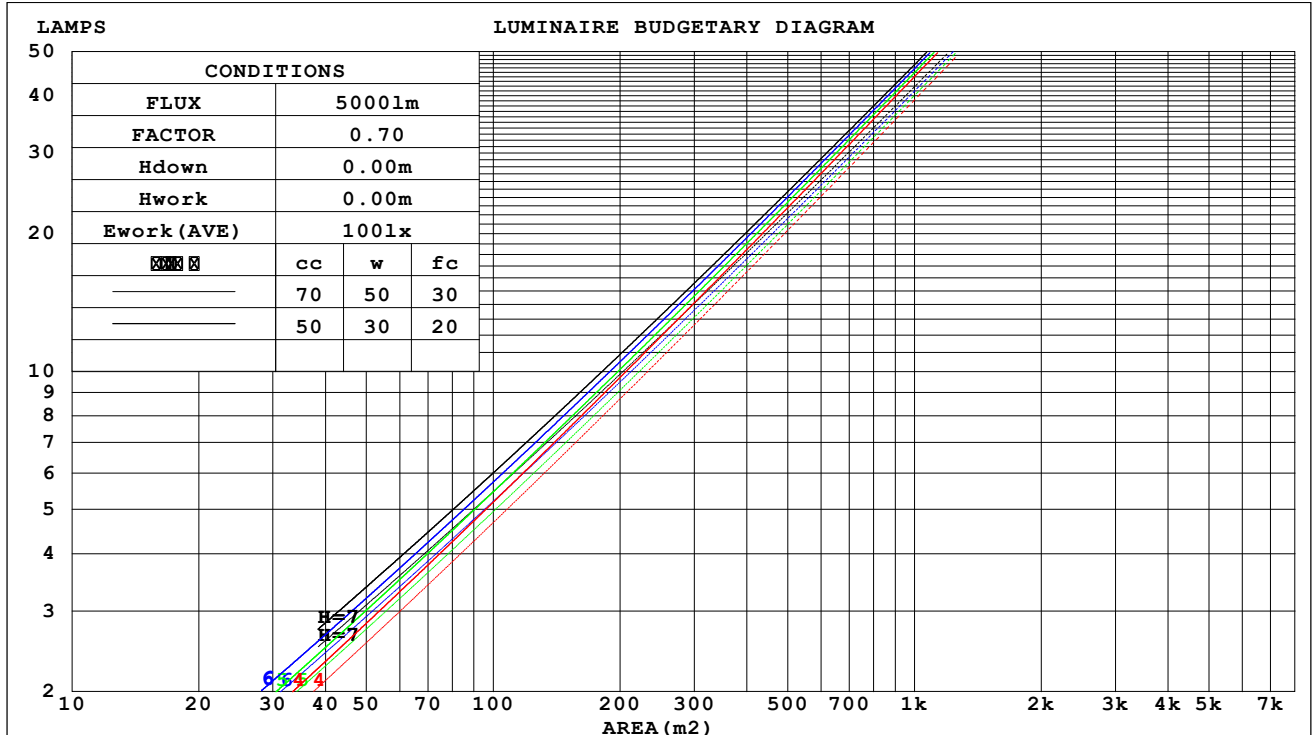
DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | Shielding Angle:       |

| cc  | 80%                   |     |     | 70% |     |     | 50% |     |     | 30% |     |     | 10% |     |     | 0 |
|-----|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| w   | 50%                   | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| fc  | 20%                   |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 20% |     |     | 0 |
| RCR | RCR:Room Cavity Ratio |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   |



C Range: 0 - 360DEG

C Interval: For a lens beam angle of 15°

Test Speed: HIGH

Temperature: 77.54°F

Operators: zoe

Test Date: 2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity: 65.0%

Test Distance: 124.409" [K=1.0000]

Remarks: LAMP: BXR-V-DR-1830G-100Z-A-23 Ra: 90

LENS: PM-1103 15R+DIFFUSER

DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up

**WEC AND CCEC**

|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | Shielding Angle:       |

| cc   | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| w    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| fc   | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |
| 0.0  |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |
| 1.0  | .101                  | .057 | .018 | .097 | .055 | .017 | .089                            | .051 | .016 | .081 | .047 | .015 | .074 | .043 | .014 |   |
| 2.0  | .095                  | .052 | .016 | .092 | .050 | .016 | .085                            | .047 | .015 | .079 | .044 | .014 | .073 | .041 | .013 |   |
| 3.0  | .090                  | .048 | .014 | .087 | .046 | .014 | .081                            | .044 | .013 | .076 | .042 | .013 | .071 | .039 | .012 |   |
| 4.0  | .085                  | .044 | .013 | .082 | .043 | .013 | .077                            | .041 | .012 | .073 | .039 | .012 | .069 | .037 | .011 |   |
| 5.0  | .080                  | .041 | .012 | .078 | .040 | .012 | .074                            | .038 | .011 | .070 | .037 | .011 | .066 | .035 | .011 |   |
| 6.0  | .076                  | .038 | .011 | .074 | .037 | .011 | .070                            | .036 | .011 | .067 | .035 | .010 | .064 | .034 | .010 |   |
| 7.0  | .072                  | .036 | .010 | .071 | .035 | .010 | .067                            | .034 | .010 | .065 | .033 | .010 | .062 | .032 | .009 |   |
| 8.0  | .069                  | .034 | .009 | .067 | .033 | .009 | .065                            | .032 | .009 | .062 | .031 | .009 | .060 | .031 | .009 |   |
| 9.0  | .066                  | .032 | .009 | .065 | .031 | .009 | .062                            | .031 | .009 | .060 | .030 | .009 | .058 | .029 | .008 |   |
| 10.0 | .063                  | .030 | .008 | .062 | .030 | .008 | .060                            | .029 | .008 | .058 | .029 | .008 | .056 | .028 | .008 |   |

| cc   | 80%                   |      |      | 70%  |      |      | 50%                                        |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|--------------------------------------------|------|------|------|------|------|------|------|------|---|
| w    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                                        | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| fc   | 20%                   |      |      | 20%  |      |      | 20%                                        |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0  | .121                  | .121 | .121 | .104 | .104 | .104 | .071                                       | .071 | .071 | .041 | .041 | .041 | .013 | .013 | .013 |   |
| 1.0  | .108                  | .100 | .093 | .093 | .086 | .080 | .063                                       | .059 | .056 | .036 | .034 | .032 | .012 | .011 | .010 |   |
| 2.0  | .098                  | .084 | .073 | .084 | .073 | .063 | .057                                       | .050 | .044 | .033 | .029 | .026 | .011 | .009 | .008 |   |
| 3.0  | .089                  | .072 | .059 | .076 | .062 | .051 | .052                                       | .043 | .036 | .030 | .025 | .021 | .010 | .008 | .007 |   |
| 4.0  | .082                  | .063 | .048 | .070 | .054 | .042 | .048                                       | .038 | .029 | .028 | .022 | .017 | .009 | .007 | .006 |   |
| 5.0  | .076                  | .055 | .040 | .065 | .048 | .035 | .045                                       | .033 | .025 | .026 | .020 | .015 | .008 | .006 | .005 |   |
| 6.0  | .070                  | .049 | .034 | .060 | .042 | .029 | .042                                       | .030 | .021 | .024 | .017 | .012 | .008 | .006 | .004 |   |
| 7.0  | .066                  | .044 | .029 | .057 | .038 | .025 | .039                                       | .027 | .018 | .023 | .016 | .011 | .007 | .005 | .003 |   |
| 8.0  | .062                  | .040 | .025 | .053 | .034 | .021 | .037                                       | .024 | .015 | .021 | .014 | .009 | .007 | .005 | .003 |   |
| 9.0  | .058                  | .036 | .021 | .050 | .031 | .019 | .035                                       | .022 | .013 | .020 | .013 | .008 | .007 | .004 | .003 |   |
| 10.0 | .055                  | .033 | .019 | .048 | .029 | .016 | .033                                       | .020 | .012 | .019 | .012 | .007 | .006 | .004 | .002 |   |

C Range: 0 - 360DEG

C Interval:For a lens beam angle of 15°

Test Speed: HIGH

Temperature:77.54°F

Operators:zoe

Test Date:2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity:65.0%

Test Distance:124.409" [K=1.0000]

Remarks: LAMP:BXRV-DR-1830G-100Z-A-23 Ra:90

LENS:PM-1103 15R+DIFFUSER

DRIVER:PUP10A-1WMC-700 500mA

30minutes warm-up

**UGR(Unified Glare Rating) Table**

|                                                                                    |               |                  |      |      |                  |               |                |                        |      |      |      |
|------------------------------------------------------------------------------------|---------------|------------------|------|------|------------------|---------------|----------------|------------------------|------|------|------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |               |                  |      |      |                  |               |                |                        |      |      |      |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       |               |                  |      |      | TYPE:            |               |                | WEIGHT:                |      |      |      |
| SPEC.: 3000K                                                                       |               |                  |      |      | DIM.:            |               |                | SERIAL No.: 2312281382 |      |      |      |
| MFR.: MERCURY LIGHTING                                                             |               |                  |      |      | SUR.: 0.002601m2 |               |                | 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                                                                      | 2H            | 15.9             | 16.7 | 16.1 | 16.9             | 17.0          | 15.8           | 16.6                   | 16.0 | 16.8 | 16.9 |
|                                                                                    | 3H            | 15.8             | 16.6 | 16.1 | 16.8             | 17.0          | 15.8           | 16.5                   | 16.0 | 16.7 | 16.9 |
|                                                                                    | 4H            | 15.8             | 16.5 | 16.0 | 16.7             | 16.9          | 15.7           | 16.4                   | 16.0 | 16.6 | 16.9 |
|                                                                                    | 6H            | 15.7             | 16.4 | 16.0 | 16.6             | 16.8          | 15.7           | 16.3                   | 16.0 | 16.6 | 16.8 |
|                                                                                    | 8H            | 15.7             | 16.3 | 16.0 | 16.6             | 16.8          | 15.6           | 16.3                   | 15.9 | 16.5 | 16.8 |
|                                                                                    | 12H           | 15.6             | 16.2 | 16.0 | 16.5             | 16.8          | 15.6           | 16.2                   | 15.9 | 16.5 | 16.8 |
| 4H                                                                                 | 2H            | 15.8             | 16.5 | 16.0 | 16.7             | 16.9          | 15.7           | 16.4                   | 16.0 | 16.6 | 16.8 |
|                                                                                    | 3H            | 15.7             | 16.3 | 16.0 | 16.6             | 16.9          | 15.7           | 16.3                   | 16.0 | 16.6 | 16.8 |
|                                                                                    | 4H            | 15.7             | 16.2 | 16.0 | 16.5             | 16.8          | 15.6           | 16.2                   | 16.0 | 16.5 | 16.8 |
|                                                                                    | 6H            | 15.6             | 16.1 | 16.0 | 16.4             | 16.8          | 15.6           | 16.1                   | 16.0 | 16.4 | 16.8 |
|                                                                                    | 8H            | 15.6             | 16.0 | 16.0 | 16.4             | 16.7          | 15.6           | 16.0                   | 16.0 | 16.4 | 16.7 |
|                                                                                    | 12H           | 15.5             | 16.0 | 16.0 | 16.3             | 16.7          | 15.5           | 16.0                   | 16.0 | 16.3 | 16.7 |
| 8H                                                                                 | 4H            | 15.6             | 16.0 | 15.9 | 16.4             | 16.7          | 15.5           | 16.0                   | 15.9 | 16.3 | 16.7 |
|                                                                                    | 6H            | 15.5             | 15.9 | 15.9 | 16.3             | 16.7          | 15.5           | 15.9                   | 15.9 | 16.2 | 16.7 |
|                                                                                    | 8H            | 15.5             | 15.8 | 15.9 | 16.2             | 16.7          | 15.5           | 15.8                   | 15.9 | 16.2 | 16.7 |
|                                                                                    | 12H           | 15.5             | 15.7 | 15.9 | 16.2             | 16.7          | 15.5           | 15.8                   | 15.9 | 16.2 | 16.7 |
| 12H                                                                                | 4H            | 15.5             | 15.9 | 15.9 | 16.3             | 16.7          | 15.5           | 15.9                   | 15.9 | 16.3 | 16.7 |
|                                                                                    | 6H            | 15.5             | 15.8 | 15.9 | 16.2             | 16.6          | 15.4           | 15.8                   | 15.9 | 16.2 | 16.6 |
|                                                                                    | 8H            | 15.4             | 15.7 | 15.9 | 16.2             | 16.6          | 15.4           | 15.7                   | 15.9 | 16.2 | 16.6 |
| Variations with the observer position at spacings(CIE Pub.117) :                   |               |                  |      |      |                  |               |                |                        |      |      |      |
| S = 1.0H                                                                           | + 2.5 / - 5.5 |                  |      |      |                  | + 2.5 / - 4.9 |                |                        |      |      |      |
| 1.5H                                                                               | + 3.8 / - 4.4 |                  |      |      |                  | + 3.9 / - 3.6 |                |                        |      |      |      |
| 2.0H                                                                               | + 4.1 / - 3.6 |                  |      |      |                  | + 3.8 / - 3.1 |                |                        |      |      |      |

CIE Pub.117, 889.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.4)  
 Area: 0.002601 m2

|                                          |                                                      |
|------------------------------------------|------------------------------------------------------|
| C Range: 0 - 360DEG                      | γ Range: 0 - 180DEG                                  |
| C Interval: For a lens beam angle of 15° | γ Interval: 1.0DEG                                   |
| Test Speed: HIGH                         | Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.461 |
| Temperature: 77.54°F                     | Humidity: 65.0%                                      |
| Operators: zoe                           | Test Distance: 124.409" [K=1.0000]                   |
| Test Date: 2023-12-28                    | Remarks: LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90        |
|                                          | LENS: PM-1103 15R+DIFFUSER                           |
|                                          | DRIVER: PUP10A-1WMC-700 500mA                        |
|                                          | 30minutes warm-up                                    |

**UTILIZATION FACTORS TABLE**

|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 56                                                   | 52  | 49        | 55  | 52  | 49  | 55  | 51            | 49  | 47     |
| 0.80                             | 60                                                   | 57  | 54        | 60  | 57  | 54  | 59  | 56            | 54  | 52     |
| 1.00                             | 63                                                   | 60  | 57        | 63  | 59  | 57  | 62  | 59            | 57  | 54     |
| 1.25                             | 66                                                   | 63  | 60        | 65  | 62  | 60  | 64  | 61            | 60  | 57     |
| 1.50                             | 68                                                   | 65  | 62        | 67  | 64  | 62  | 65  | 63            | 61  | 59     |
| 2.00                             | 69                                                   | 67  | 65        | 68  | 66  | 64  | 67  | 65            | 63  | 60     |
| 2.50                             | 70                                                   | 68  | 66        | 69  | 67  | 65  | 67  | 66            | 64  | 60     |
| 3.00                             | 71                                                   | 69  | 67        | 70  | 68  | 67  | 68  | 67            | 65  | 61     |
| 4.00                             | 73                                                   | 71  | 69        | 71  | 70  | 69  | 69  | 68            | 67  | 62     |
| 5.00                             | 73                                                   | 72  | 71        | 72  | 71  | 70  | 69  | 69            | 68  | 63     |
| ROOM INDEX                       | UF (total)                                           |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |                                                      |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

C Range: 0 - 360DEG

C Interval: For a lens beam angle of 15°

Test Speed: HIGH

Temperature: 77.54°F

Operators: zoe

Test Date: 2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity: 65.0%

Test Distance: 124.409" [K=1.0000]

Remarks: LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90

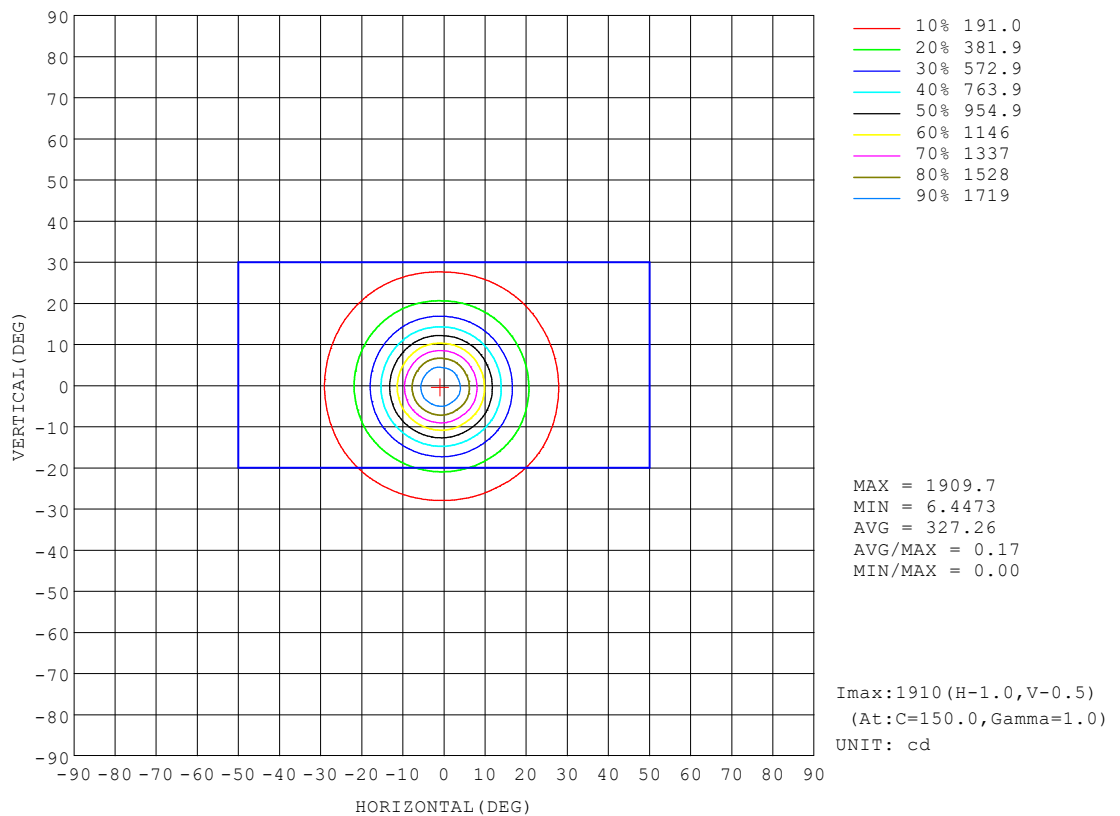
LENS: PM-1103 15R+DIFFUSER

DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up

**ISOCANDELA DIAGRAM**

|                                                                                                    |                         |                               |
|----------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|
| <b>Test:</b> U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br><b>Lamp Flux:</b> 889.25x1 lm |                         |                               |
| <b>NAME:</b> CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                                | <b>TYPE:</b>            | <b>WEIGHT:</b>                |
| <b>SPEC.:</b> 3000K                                                                                | <b>DIM.:</b>            | <b>SERIAL No.:</b> 2312281382 |
| <b>MFR.:</b> MERCURY LIGHTING                                                                      | <b>SUR.:</b> 0.002601m2 | <b>Shielding Angle:</b>       |


**C Range:** 0 - 360DEG

**C Interval:** For a lens beam angle of 15°

**Test Speed:** HIGH

**Temperature:** 77.54°F

**Operators:** zoe

**Test Date:** 2023-12-28

**γ Range:** 0 - 180DEG

**γ Interval:** 1.0DEG

**Test System:** EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

**Humidity:** 65.0%

**Test Distance:** 124.409" [K=1.0000]

**Remarks:** LAMP: BXRV-DR-1830G-100Z-A-23 Ra:90

LENS: PM-1103 15R+DIFFUSER

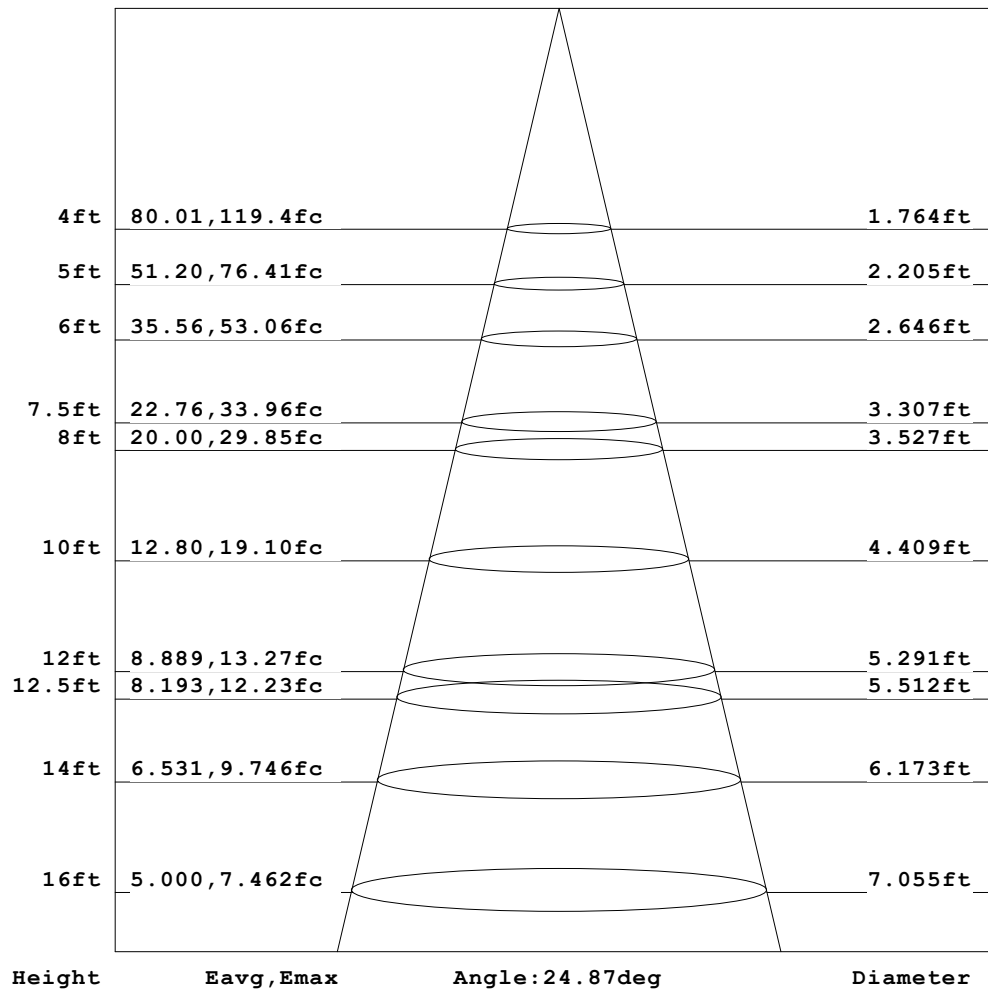
DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up

**AAI Figure**

|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | Shielding Angle:       |

Flux out:214.3 lm

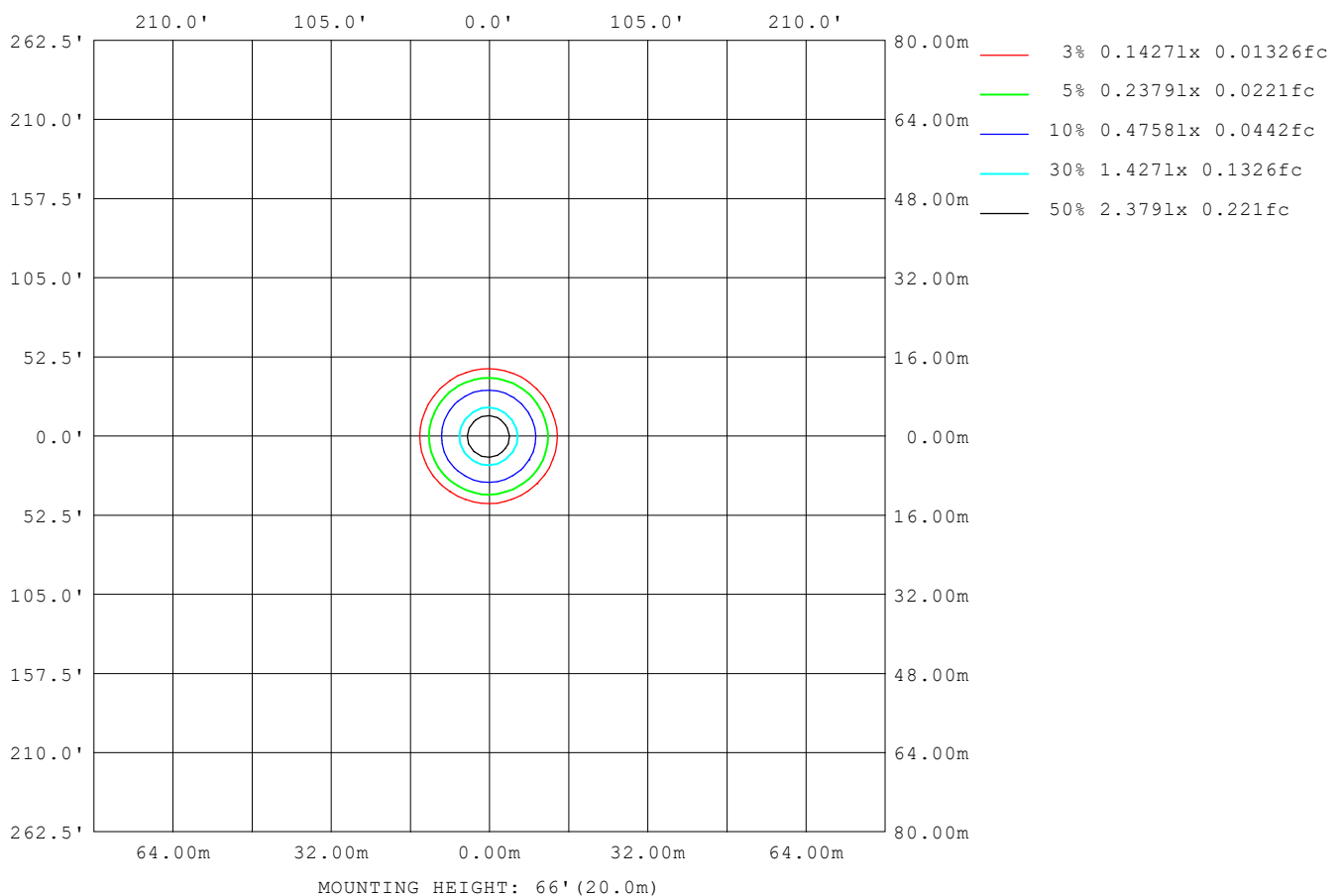


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

LENS: PM-1103 15R+DIFFUSER  
 DRIVER: PUP10A-1WMC-700 500mA  
 30minutes warm-up

**ISOLUX DIAGRAM**

|                                                                                                    |                         |                               |
|----------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|
| <b>Test:</b> U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br><b>Lamp Flux:</b> 889.25x1 lm |                         |                               |
| <b>NAME:</b> CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                                | <b>TYPE:</b>            | <b>WEIGHT:</b>                |
| <b>SPEC.:</b> 3000K                                                                                | <b>DIM.:</b>            | <b>SERIAL No.:</b> 2312281382 |
| <b>MFR.:</b> MERCURY LIGHTING                                                                      | <b>SUR.:</b> 0.002601m2 | <b>Shielding Angle:</b>       |


**C Range:** 0 - 360DEG

**C Interval:** For a lens beam angle of 15°

**Test Speed:** HIGH

**Temperature:** 77.54°F

**Operators:** zoe

**Test Date:** 2023-12-28

**γ Range:** 0 - 180DEG

**γ Interval:** 1.0DEG

**Test System:** EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

**Humidity:** 65.0%

**Test Distance:** 124.409" [K=1.0000]

**Remarks:** LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90

**LENS:** PM-1103 15R+DIFFUSER

**DRIVER:** PUP10A-1WMC-700 500mA

**30minutes warm-up**

**LED Avg.L Report**

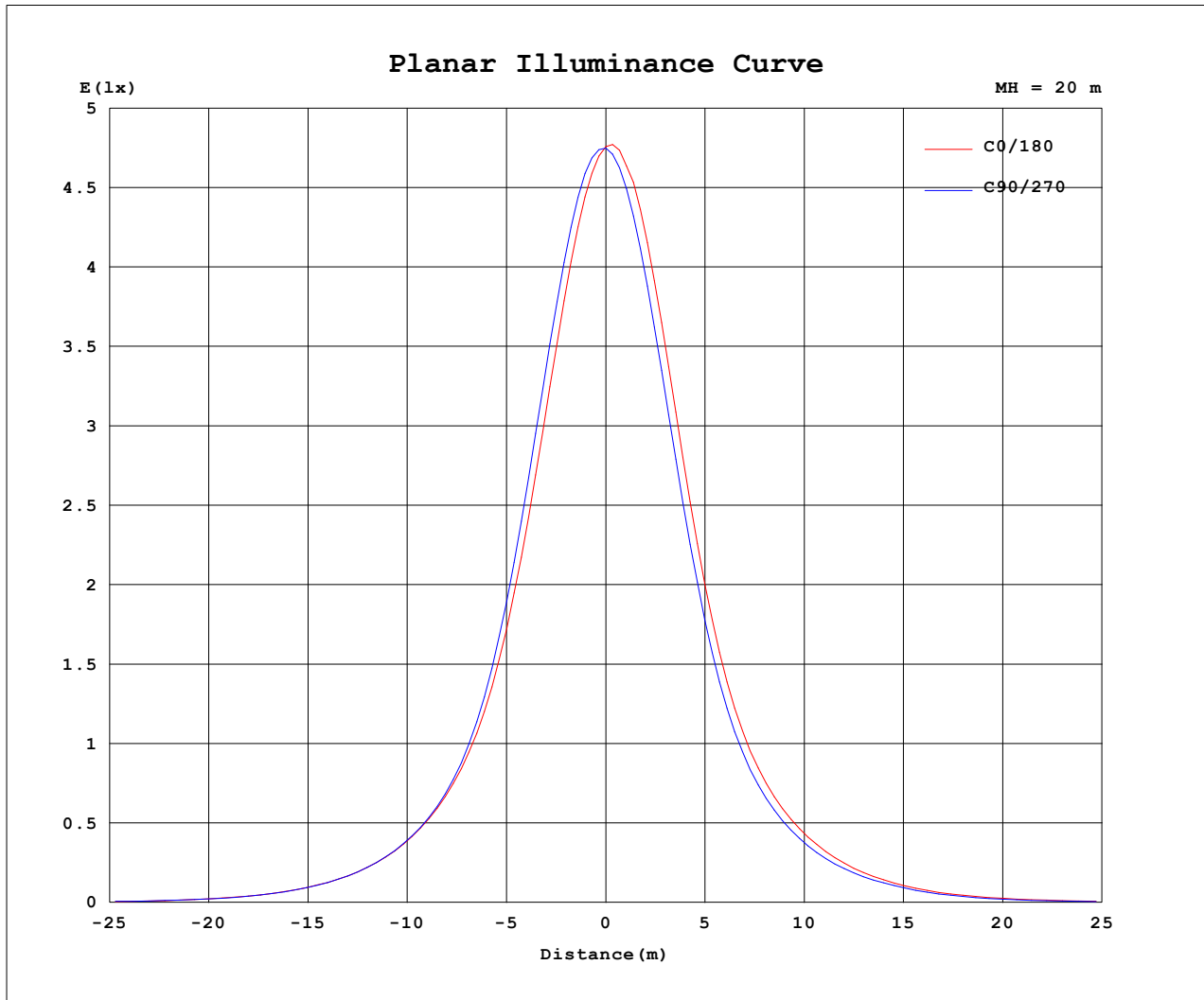
|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | Shielding Angle:       |

| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 2758  |
| L_0~180 (75) av  | 1337  |
| L_0~180 (85) av  | 1841  |
| L_90~270 (65) av | 2706  |
| L_90~270 (75) av | 1297  |
| L_90~270 (85) av | 1812  |
| L_45 (65) av     | 3296  |
| L_45 (75) av     | 1656  |
| L_45 (85) av     | 1936  |

Standard: GB/T 29293-2012

|                                                                                                                                                        |                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C Range: 0 - 360DEG<br>C Interval: For a lens beam angle of 15°<br>Test Speed: HIGH<br>Temperature: 77.54°F<br>Operators: zoe<br>Test Date: 2023-12-28 | γ Range: 0 - 180DEG<br>γ Interval: 1.0DEG<br>Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.461<br>Humidity: 65.0%<br>Test Distance: 124.409" [K=1.0000]<br>Remarks: LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90<br>LENS: PM-1103 15R-DIFFUSER<br>DRIVER: PUP10A-1WMC-700 500mA<br>30minutes warm-up |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Planar Illuminance Curve



C Range: 0 - 360DEG

C Interval: For a lens beam angle of 15°

Test Speed: HIGH

Temperature: 77.54°F

Operators: zoe

Test Date: 2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity: 65.0%

Test Distance: 124.409" [K=1.0000]

Remarks: LAMP: BXRV-DR-1830G-100Z-A-23 Ra: 90

LENS: PM-1103 15R+DIFFUSER

DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up

**LUMINOUS DISTRIBUTION INTENSITY DATA**

|                                                                                    |                  |                        |
|------------------------------------------------------------------------------------|------------------|------------------------|
| Test:U:120.14V I:0.0958A P:11.376W PF:0.9869 Freq:59.98Hz<br>Lamp Flux:889.25x1 lm |                  |                        |
| NAME: CTL-MPS-1.5-SQ-TF/TL-SH-SG/DB/TP-DW-15                                       | TYPE:            | WEIGHT:                |
| SPEC.: 3000K                                                                       | DIM.:            | SERIAL No.: 2312281382 |
| MFR.: MERCURY LIGHTING                                                             | SUR.: 0.002601m2 | Shielding Angle:       |

Table--1

UNIT: cd

| C (DEG)<br>(DEG) | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |  |  |  |  |  |  |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|
| 0                | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 | 1902 |  |  |  |  |  |  |
| 5                | 1631 | 1662 | 1678 | 1722 | 1746 | 1772 | 1764 | 1730 | 1713 | 1668 | 1644 | 1621 |  |  |  |  |  |  |
| 10               | 1127 | 1163 | 1185 | 1238 | 1272 | 1302 | 1292 | 1253 | 1225 | 1170 | 1140 | 1113 |  |  |  |  |  |  |
| 15               | 680  | 704  | 715  | 746  | 769  | 792  | 790  | 762  | 740  | 700  | 678  | 665  |  |  |  |  |  |  |
| 20               | 406  | 418  | 414  | 424  | 436  | 455  | 461  | 445  | 429  | 405  | 394  | 392  |  |  |  |  |  |  |
| 25               | 252  | 257  | 251  | 255  | 262  | 276  | 282  | 272  | 260  | 245  | 241  | 242  |  |  |  |  |  |  |
| 30               | 155  | 157  | 153  | 156  | 161  | 171  | 174  | 167  | 159  | 150  | 149  | 149  |  |  |  |  |  |  |
| 35               | 92.9 | 93.6 | 91.0 | 93.0 | 96.1 | 102  | 104  | 99.5 | 95.4 | 90.7 | 89.5 | 89.7 |  |  |  |  |  |  |
| 40               | 52.0 | 53.2 | 50.5 | 51.2 | 53.3 | 56.6 | 57.6 | 56.4 | 54.1 | 49.1 | 51.0 | 51.5 |  |  |  |  |  |  |
| 45               | 26.9 | 30.7 | 28.9 | 26.7 | 29.8 | 31.8 | 30.4 | 32.6 | 30.0 | 24.9 | 28.5 | 28.9 |  |  |  |  |  |  |
| 50               | 12.6 | 17.7 | 17.0 | 14.1 | 17.7 | 18.4 | 15.4 | 19.0 | 16.8 | 12.1 | 16.1 | 15.9 |  |  |  |  |  |  |
| 55               | 6.16 | 9.26 | 9.35 | 7.23 | 10.3 | 10.0 | 7.30 | 10.5 | 8.64 | 6.00 | 8.41 | 7.83 |  |  |  |  |  |  |
| 60               | 4.27 | 5.28 | 5.34 | 4.71 | 5.88 | 5.66 | 4.73 | 5.67 | 4.97 | 4.11 | 4.75 | 4.70 |  |  |  |  |  |  |
| 65               | 2.78 | 3.51 | 3.62 | 3.22 | 3.93 | 3.92 | 3.28 | 3.75 | 3.44 | 2.73 | 3.14 | 3.11 |  |  |  |  |  |  |
| 70               | 1.39 | 2.04 | 2.14 | 1.83 | 2.45 | 2.50 | 2.00 | 2.34 | 2.09 | 1.41 | 1.81 | 1.73 |  |  |  |  |  |  |
| 75               | 0.75 | 1.02 | 1.10 | 0.99 | 1.29 | 1.31 | 1.05 | 1.17 | 1.03 | 0.75 | 0.91 | 0.89 |  |  |  |  |  |  |
| 80               | 0.53 | 0.62 | 0.65 | 0.60 | 0.75 | 0.74 | 0.59 | 0.67 | 0.59 | 0.49 | 0.55 | 0.56 |  |  |  |  |  |  |
| 85               | 0.34 | 0.39 | 0.45 | 0.47 | 0.53 | 0.55 | 0.49 | 0.47 | 0.42 | 0.35 | 0.34 | 0.33 |  |  |  |  |  |  |
| 90               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 95               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 100              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 105              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 110              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 115              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 120              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 125              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 130              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 135              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 140              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 145              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 150              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 155              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 160              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 165              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 170              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 175              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |
| 180              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |

C Range: 0 - 360DEG

C Interval: For a lens beam angle of 15°

Test Speed: HIGH

Temperature: 77.54°F

Operators: zoe

Test Date: 2023-12-28

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.461

Humidity: 65.0%

Test Distance: 124.409" [K=1.0000]

Remarks: LAMP: BXR-V-DR-1830G-100Z-A-23 Ra: 90

LENS: PM-1103 15R+DIFFUSER

DRIVER: PUP10A-1WMC-700 500mA

30minutes warm-up