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**ÖLÇÜM RAPORU**  
**MEASUREMENT REPORT**

TL-806

19-TST-0095-  
202

08-19

**Müşterinin Adı Adresi**  
Customer name/address

: HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.  
Güllübağlar Mah. Kahramanlar Cad. No:3-1 34906 PENDİK-  
İSTANBUL/TÜRKİYE

**İstek Numarası**  
Order No

: 19-TST-0095

**Numunenin Adı ve Tarif**  
Name and identity of test item

: Leoline® S12 915mm DMX SC CW Linear Spot Beam 14°

**Numunenin kabul tarihi**  
The date of receipt of test item

: 31.07.2019

**Açıklamalar**  
Remarks

: DGC'ye , IES LM-79-08 standardı uyarınca fotometrik ölçümler yapılmıştır.  
Photometric measurement has been applied to EUT according to IESNA LM-79-08

**Deneyin Yapıldığı Tarih**  
Date of Test

: 03.08.2019

**Raporun Sayfa Sayısı**  
Number of Pages of the Report

:18

Deney laboratuvarı olarak faaliyet gösteren TÜV AUSTRIA TURK, International Accreditation Service, Inc. (IAS) TL-806 ile TS EN ISO/IEC 17025 Nisan 2012 standardına göre akredite edilmiştir.  
TÜV AUSTRIA TURK is accredited by International Accreditation Service, Inc. (IAS) under registration number TL-806 for TS EN ISO/IEC 17025 April 2012 as a test laboratory.

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Deney ve /veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri ( olması halinde ) ve deney metotları bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.  
The test and/or measurement results, the uncertainties ( if applicable ) with confidence probability and test methods are given on the following pages which are part of this report.

Bu rapor, laboratuvara gönderilen numunelere uygulanan deney/deneyler sonucu hazırlanmıştır. Müşteriye ait diğer numuneleri kapsamaz.  
This report was prepared according to test results of specimens sent to laboratory. It doesn't contain other specimens belonging to customer.

**Mühür ve Tarih**  
Seal and Date



**Deney Sorumlusu**  
Person in charge of test

Saltuk Buğra GÜNEŞ

**Onaylayan**  
Approval

Gürhan CANSIZ

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1.1

**DGC, Çevre Şartları ve Sembollerin Tanımları** (Description of the EUT, Environmental Conditions and Symbol Definitions)

|  |  |
|--|--|
| <b>Markası / Brand</b>                             | : HERA   |
| <b>Modeli / Model</b>                              | : Leoline® S12 915mm DMX SC CW<br>Linear Spot Beam 14° |
| <b>Seri Numarası / Serial Number</b>               | : Test Numunesi<br>Test Sample                         |
| <b>Beyan Gücü / Rated Power</b>                    | : 46 W   |
| <b>Beyan Gerilimi / Rated Voltage</b>              | : 48 VDC   |
| <b>Sembollerin Tanımı / Definitions of Symbols</b> | DGC= Deneyden Geçen Cihaz<br>EUT=Equipment Under Test  |



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**1.2 Deney Standartları (Test Standards)**

Deneyler aşağıdaki standartlara göre yapılmıştır (The tests were performed according to following standards):

**Standart / Standard**

- IESNA LM-79-08 Electrical and Photometric Measurements of Solid-State Lighting Products

**1.3 Deney Ekipmanları (Test Equipments)**

| Kayıt No. (ID – No.) | Tip (Type)         | Kalibrasyon Tarihi (Calibration Date) | Sonraki Kalibrasyon Tarihi (Next Calibration Date) | Kontrol (Check Point)               |
|----------------------|--------------------|---------------------------------------|--|-------------------------------------|
| LAB-011              | Goniophotometer    | 09.01.2019                            | 09.01.2020   | <input checked="" type="checkbox"/> |
| LAB-015              | AC Power Supply    | 05.06.2018                            | 05.06.2020   | <input checked="" type="checkbox"/> |
| LAB-027              | Powermeter         | 09.01.2019                            | 09.01.2020   | <input checked="" type="checkbox"/> |
| LAB-023              | Standart Lamp      | 09.01.2019                            | 09.01.2020   | <input checked="" type="checkbox"/> |
| LAB-012              | Integrating sphere | 28.05.2018                            | 28.05.2020   | <input checked="" type="checkbox"/> |

**1.3 Komponent listesi (Component list)**

| Komponent (Component) | Üretici (Manufacturer) | Model (Model)          | Teknik Bilgi (Technical Data)   | Standart no. (Standart No.)  |
|-----------------------|------------------------|------------------------|---|--|
| LED                   | Cree Inc               | XTEAWT 6500K White Led | Binned at 85 °C • Thermal resistance: 5 °C/W • Wide viewing angle: 115°-140° Unlimited floor life at ≤ 30 °C/85% Maximum drive current: White 1.5 A, Royal Blue 1.5 A Maximum Vf for High Efficacy XT-E White: 2.85 V | UL (E349212)<br>RoHS REACH   |
| PCB                   | PCB                    | C13088_R1.1            | 0.8mm FR4 4 Layers 35+35+35+35umCu/BlackSolderMask/WhiteSilkScreen  | IPC A 600 J Class II Revizyon J standardı (COC)<br>IPC 6012 Class II<br>UL FQC |
| LENS                  | LEDIL                  | CA11016-STINA2-RS-14   | Dimensions Ø 16.1 mm Height 9.7 mm  | ANSI/ESD S20.20:2014<br>EN 61340-5-1:2007                                      |

Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürlü raporlar geçersizdir.

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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)**

**Elektriksel Ölçümler**

(Electrical Measurements)

|   |                   |
|---|-------------------|
| <b>Ölçülen Güç (W)</b><br>(Input Power)   | 44,50 W           |
| <b>Ölçülen Gerilim (V)</b><br>(Input Voltage)                                   | 46,86 VDC         |
| <b>Ölçülen Akım (A)</b><br>(Input Current)                                      | 0,95 A            |
| <b>Güç Faktörü (PF)</b><br>(Power Factor)                                       | -                 |
| <b>Ölçülen Frekans (Hz)</b><br>(Input Frequency)                                | -                 |
| <b>Ortam Sıcaklığı / Bağıl Nem</b><br>(Ambient Temperature / Relative Humidity) | 25,1 °C<br>48% Rh |
| <b>Stabilizasyon Süresi</b><br>(Stabilization Time)                             | 60 dk ±5dk        |

**Fotometrik Ölçüm Sonuçları**

(Photometric Measurement Results)

|   |        |
|---|--------|
| <b>Toplam Işık Akısı</b><br>(Total Luminous Flux) (lm)      | 2904,8 |
| <b>Maksimum Işık Şiddeti</b><br>(Max. Light Intensity) (cd) | 21458  |
| <b>Armatür Etkinliği</b><br>(Luminaire Efficacy) (lm/W)     | 65,28  |



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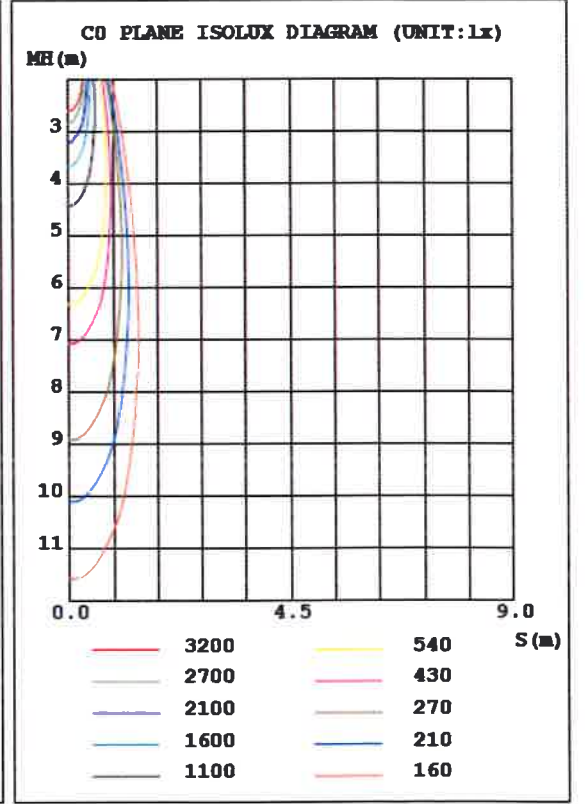
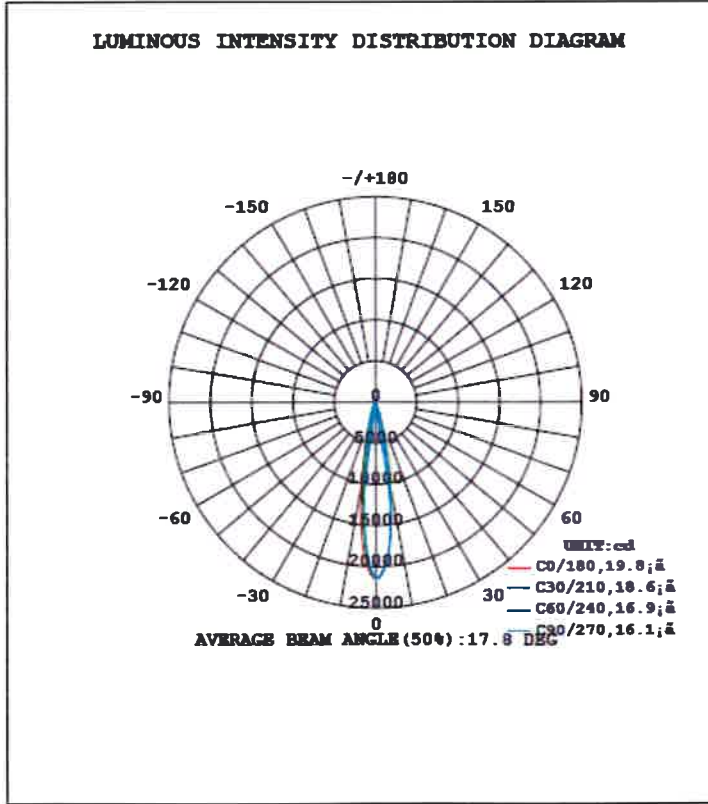
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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)**



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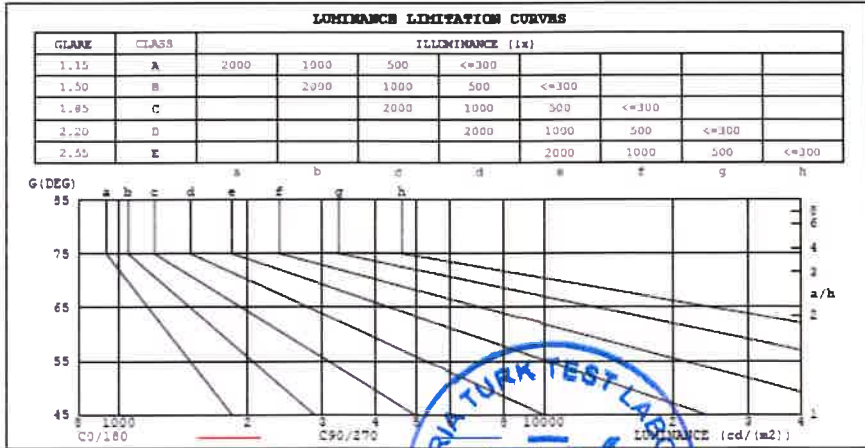
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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW )**

**ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES**

**ZONAL FLUX DIAGRAM:**

| γ   | C0     | C45    | C90    | C135   | C180   | C225   | C270   | C315   | γ       | Φ zone | Φ total | Wlum.lamp |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|---------|-----------|
| 5   | 1806   | 1627   | 1515   | 1420   | 1798   | 1921   | 1809   | 1825   | 0- 5    | 459.0  | 459.0   | 15.0,15.0 |
| 10  | 1012   | 759.8  | 608.5  | 523.3  | 1097   | 1021   | 873.4  | 978.3  | 5- 10   | 904.5  | 1264    | 46.3,46.3 |
| 15  | 424.3  | 315.5  | 236.3  | 221.4  | 475.5  | 410.0  | 314.6  | 388.9  | 10- 15  | 681.9  | 2045    | 70.4,70.4 |
| 20  | 162.7  | 140.6  | 97.17  | 141.2  | 179.0  | 169.0  | 121.2  | 167.5  | 15- 20  | 284.2  | 2430    | 82.6,82.6 |
| 25  | 62.56  | 60.01  | 39.22  | 64.40  | 71.89  | 73.25  | 47.34  | 72.37  | 20- 25  | 205.0  | 2438    | 92.7,92.7 |
| 30  | 26.15  | 26.60  | 16.86  | 29.17  | 28.81  | 31.37  | 20.02  | 30.18  | 25- 30  | 102.0  | 2738    | 94.2,94.2 |
| 35  | 13.14  | 12.92  | 8.990  | 14.18  | 12.82  | 14.30  | 9.320  | 14.09  | 30- 35  | 52.44  | 2791    | 96.1,96.1 |
| 40  | 7.453  | 7.509  | 5.306  | 7.540  | 6.891  | 7.289  | 5.405  | 7.607  | 35- 40  | 30.75  | 2822    | 97.1,97.1 |
| 45  | 4.989  | 5.120  | 3.389  | 4.917  | 4.650  | 4.686  | 3.267  | 4.949  | 40- 45  | 20.19  | 2842    | 97.8,97.8 |
| 50  | 3.712  | 4.814  | 2.808  | 4.066  | 3.997  | 3.679  | 2.480  | 4.129  | 45- 50  | 15.98  | 2858    | 98.4,98.4 |
| 55  | 2.888  | 3.501  | 2.004  | 3.445  | 2.745  | 3.181  | 1.761  | 3.464  | 50- 55  | 14.07  | 2872    | 98.8,98.8 |
| 60  | 2.229  | 2.754  | 1.295  | 2.588  | 2.082  | 2.400  | 1.205  | 2.728  | 55- 60  | 11.82  | 2884    | 99.2,99.2 |
| 65  | 1.748  | 1.925  | 0.8268 | 1.784  | 1.577  | 1.614  | 0.8077 | 1.890  | 60- 65  | 9.172  | 2892    | 99.6,99.6 |
| 70  | 1.220  | 1.044  | 0.4789 | 0.9485 | 1.172  | 0.9281 | 0.4701 | 1.031  | 65- 70  | 6.087  | 2899    | 99.8,99.8 |
| 75  | 0.6610 | 0.4687 | 0.1999 | 0.4427 | 0.6904 | 0.4687 | 0.2399 | 0.4552 | 70- 75  | 3.245  | 2902    | 99.9,99.9 |
| 80  | 0.2826 | 0.1877 | 0.0725 | 0.1899 | 0.2782 | 0.1796 | 0.1028 | 0.1972 | 75- 80  | 1.527  | 2904    | 100,100   |
| 85  | 0.0204 | 0.0012 | 0      | 0.0047 | 0.0290 | 0.0154 | 0.0055 | 0.0116 | 80- 85  | 0.2921 | 2905    | 100,100   |
| 90  | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 85- 90  | 0.0076 | 2905    | 100,100   |
| 95  | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 90- 95  | 0      | 2905    | 100,100   |
| 100 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 95-100  | 0      | 2905    | 100,100   |
| 105 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 100-105 | 0      | 2905    | 100,100   |
| 110 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 105-110 | 0      | 2905    | 100,100   |
| 115 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 110-115 | 0      | 2905    | 100,100   |
| 120 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 115-120 | 0      | 2905    | 100,100   |
| 125 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 120-125 | 0      | 2905    | 100,100   |
| 130 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 125-130 | 0      | 2905    | 100,100   |
| 135 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 130-135 | 0      | 2905    | 100,100   |
| 140 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 135-140 | 0      | 2905    | 100,100   |
| 145 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 140-145 | 0      | 2905    | 100,100   |
| 150 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 145-150 | 0      | 2905    | 100,100   |
| 155 | 0      | 0.0105 | 0.0078 | 0.0078 | 0      | 0      | 0      | 0      | 150-155 | 0.0012 | 2905    | 100,100   |
| 160 | 0.0252 | 0.0519 | 0.0540 | 0.0403 | 0.0095 | 0.0087 | 0.0018 | 0.0029 | 155-160 | 0.0244 | 2905    | 100,100   |
| 165 | 0.0721 | 0.0982 | 0.1159 | 0.0776 | 0.0247 | 0.0225 | 0.0197 | 0.0172 | 160-165 | 0.0642 | 2905    | 100,100   |
| 170 | 0.1082 | 0.1276 | 0.1465 | 0.1057 | 0.0390 | 0.0326 | 0.0324 | 0.0323 | 165-170 | 0.0795 | 2905    | 100,100   |
| 175 | 0.1070 | 0.1186 | 0.1167 | 0.1047 | 0.0466 | 0.0419 | 0.0397 | 0.0475 | 170-175 | 0.0565 | 2905    | 100,100   |
| 180 | 0.0895 | 0.0846 | 0.0718 | 0.0844 | 0.0815 | 0.0870 | 0.0480 | 0.0798 | 175-180 | 0.0189 | 2905    | 100,100   |



| G (DEG) | C0/130 | C90/270 |
|---------|--------|---------|
| 85      | 35     | 0       |
| 90      | 145    | 42      |
| 75      | 255    | 77      |
| 70      | 359    | 140     |
| 65      | 414    | 196     |
| 60      | 448    | 259     |
| 55      | 505    | 349     |
| 50      | 573    | 390     |
| 45      | 706    | 475     |

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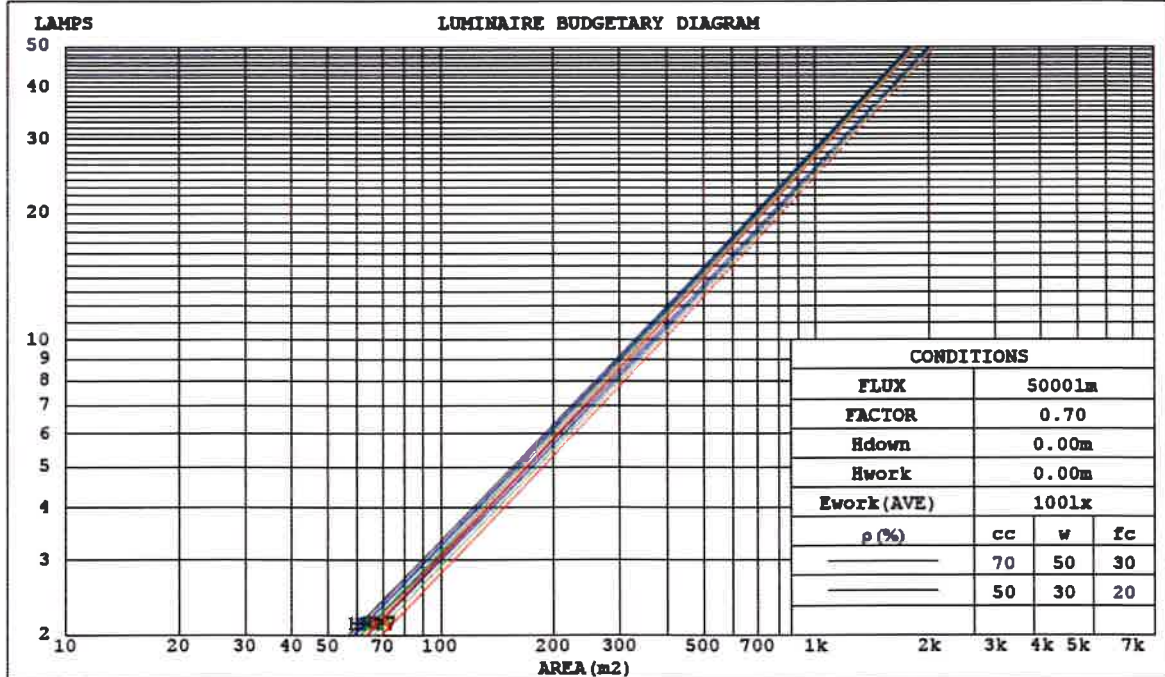
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2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW )

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

| $\rho_{cc}$ | 80%                   |      |      | 70%  |      |      | 50%                              |      |      | 30%  |      |      | 10%  |      |      | 0   |
|-------------|-----------------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|------|------|------|-----|
| $\rho_w$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                              | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0   |
| $\rho_{fc}$ | 20%                   |      |      | 20%  |      |      | 20%                              |      |      | 20%  |      |      | 20%  |      |      | 0   |
| RCR         | RCR:Room Cavity Ratio |      |      |      |      |      | Coefficients of Utilization (CU) |      |      |      |      |      |      |      |      |     |
| 0.0         | 1.19                  | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.11                             | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | .00 |
| 1.0         | 1.13                  | 1.11 | 1.10 | 1.11 | 1.09 | 1.08 | 1.07                             | 1.06 | 1.05 | 1.03 | 1.02 | 1.02 | 1.00 | .99  | .99  | .97 |
| 2.0         | 1.08                  | 1.05 | 1.03 | 1.07 | 1.04 | 1.02 | 1.03                             | 1.01 | .00  | 1.01 | .99  | .97  | .98  | .97  | .96  | .94 |
| 3.0         | 1.04                  | 1.00 | .98  | 1.03 | .99  | .97  | 1.00                             | .98  | .95  | .98  | .96  | .94  | .96  | .94  | .93  | .91 |
| 4.0         | 1.00                  | .96  | .94  | .99  | .96  | .93  | .97                              | .94  | .92  | .95  | .93  | .91  | .94  | .92  | .90  | .89 |
| 5.0         | .97                   | .93  | .90  | .96  | .93  | .90  | .95                              | .92  | .89  | .93  | .90  | .88  | .92  | .90  | .88  | .87 |
| 6.0         | .94                   | .90  | .87  | .93  | .90  | .87  | .92                              | .89  | .87  | .91  | .88  | .86  | .90  | .87  | .86  | .85 |
| 7.0         | .92                   | .88  | .85  | .91  | .87  | .85  | .90                              | .87  | .84  | .89  | .86  | .84  | .88  | .85  | .84  | .83 |
| 8.0         | .89                   | .85  | .83  | .89  | .85  | .83  | .88                              | .85  | .82  | .87  | .84  | .82  | .86  | .84  | .82  | .81 |
| 9.0         | .87                   | .83  | .81  | .87  | .83  | .81  | .86                              | .83  | .80  | .85  | .82  | .80  | .85  | .82  | .80  | .79 |
| 10.0        | .85                   | .81  | .79  | .85  | .81  | .79  | .84                              | .81  | .79  | .83  | .81  | .79  | .83  | .80  | .78  | .78 |





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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW )**

**WEC AND CCEC**

| $\rho_{cc}$ | 80%                   |      |      | 70%  |      |      | 50%                              |      |      | 30%  |      |      | 10%  |      |      | 0 |
|-------------|-----------------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|------|------|------|---|
| $\rho_w$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                              | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| $\rho_{fc}$ | 20%                   |      |      | 20%  |      |      | 20%                              |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR         | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients (WEC) |      |      |      |      |      |      |      |      |   |
| 0.0         |                       |      |      |      |      |      |                                  |      |      |      |      |      |      |      |      |   |
| 1.0         | .132                  | .075 | .024 | .125 | .071 | .023 | .113                             | .065 | .021 | .101 | .059 | .019 | .091 | .053 | .017 |   |
| 2.0         | .122                  | .067 | .020 | .116 | .064 | .020 | .106                             | .059 | .018 | .097 | .054 | .017 | .088 | .050 | .016 |   |
| 3.0         | .113                  | .060 | .018 | .108 | .058 | .017 | .100                             | .054 | .016 | .092 | .050 | .015 | .085 | .047 | .015 |   |
| 4.0         | .105                  | .055 | .016 | .101 | .053 | .016 | .094                             | .050 | .015 | .087 | .047 | .014 | .081 | .044 | .013 |   |
| 5.0         | .098                  | .050 | .015 | .095 | .049 | .014 | .089                             | .046 | .014 | .083 | .044 | .013 | .078 | .042 | .013 |   |
| 6.0         | .092                  | .046 | .013 | .090 | .045 | .013 | .085                             | .043 | .013 | .080 | .041 | .012 | .075 | .040 | .012 |   |
| 7.0         | .087                  | .043 | .012 | .085 | .042 | .012 | .080                             | .041 | .012 | .076 | .039 | .011 | .072 | .038 | .011 |   |
| 8.0         | .083                  | .040 | .011 | .081 | .040 | .011 | .077                             | .038 | .011 | .073 | .037 | .011 | .070 | .036 | .010 |   |
| 9.0         | .079                  | .038 | .011 | .077 | .037 | .011 | .073                             | .036 | .010 | .070 | .035 | .010 | .067 | .034 | .010 |   |
| 10.0        | .075                  | .036 | .010 | .074 | .036 | .010 | .070                             | .035 | .010 | .068 | .034 | .010 | .065 | .033 | .009 |   |

| $\rho_{cc}$ | 80%                   |      |      | 70%  |      |      | 50%   |      |      | 30%  |      |      | 10%  |      |      | 0 |
|-------------|-----------------------|------|------|------|------|------|---|------|------|------|------|------|------|------|------|---|
| $\rho_w$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| $\rho_{fc}$ | 20%                   |      |      | 20%  |      |      | 20%   |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR         | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients (CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0         | .191                  | .191 | .191 | .163 | .163 | .163 | .111  | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0         | .168                  | .158 | .149 | .144 | .135 | .128 | .098  | .093 | .088 | .057 | .054 | .051 | .018 | .017 | .017 |   |
| 2.0         | .150                  | .133 | .119 | .128 | .114 | .103 | .088  | .079 | .072 | .051 | .046 | .042 | .016 | .015 | .014 |   |
| 3.0         | .134                  | .113 | .097 | .115 | .098 | .084 | .079  | .068 | .059 | .046 | .040 | .035 | .015 | .013 | .011 |   |
| 4.0         | .121                  | .098 | .080 | .104 | .085 | .069 | .072  | .059 | .049 | .041 | .035 | .029 | .013 | .011 | .010 |   |
| 5.0         | .110                  | .085 | .067 | .095 | .074 | .058 | .065  | .052 | .041 | .038 | .030 | .024 | .012 | .010 | .008 |   |
| 6.0         | .101                  | .075 | .057 | .087 | .065 | .049 | .060  | .046 | .035 | .035 | .027 | .021 | .011 | .009 | .007 |   |
| 7.0         | .093                  | .067 | .048 | .080 | .058 | .042 | .055  | .041 | .030 | .032 | .024 | .018 | .010 | .008 | .006 |   |
| 8.0         | .087                  | .060 | .042 | .075 | .052 | .037 | .052  | .037 | .026 | .030 | .022 | .015 | .010 | .007 | .005 |   |
| 9.0         | .081                  | .054 | .037 | .070 | .047 | .032 | .048  | .033 | .023 | .028 | .020 | .013 | .009 | .006 | .004 |   |
| 10.0        | .076                  | .049 | .032 | .065 | .043 | .028 | .045  | .030 | .020 | .026 | .018 | .012 | .009 | .006 | .004 |   |



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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)**

**Uncorrected UGR Table**

| 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   | 2.7              | 3.3 | 2.8 | 3.4 | 3.5 | 0.4            | 1.0 | 0.6 | 1.1 | 1.3 |
| 3H  | 3.2              | 3.8 | 3.5 | 4.0 | 4.2 | 0.6            | 1.2 | 0.9 | 1.4 | 1.6 |
| 4H  | 3.4              | 3.9 | 3.6 | 4.1 | 4.3 | 0.6            | 1.1 | 0.9 | 1.4 | 1.6 |
| 6H  | 3.4              | 3.9 | 3.6 | 4.1 | 4.3 | 0.5            | 1.1 | 0.8 | 1.3 | 1.5 |
| 8H  | 3.3              | 3.8 | 3.6 | 4.1 | 4.3 | 0.5            | 1.0 | 0.8 | 1.2 | 1.5 |
| 12H   | 3.3              | 3.8 | 3.6 | 4.0 | 4.3 | 0.5            | 0.9 | 0.8 | 1.2 | 1.5 |
| 4H 2H   | 3.0              | 3.5 | 3.2 | 3.7 | 3.9 | 1.1            | 1.7 | 1.4 | 1.9 | 2.1 |
| 3H  | 3.6              | 4.1 | 3.9 | 4.4 | 4.6 | 1.4            | 1.9 | 1.7 | 2.2 | 2.4 |
| 4H  | 3.8              | 4.2 | 4.1 | 4.5 | 4.8 | 1.4            | 1.9 | 1.8 | 2.2 | 2.5 |
| 6H  | 3.8              | 4.2 | 4.1 | 4.5 | 4.8 | 1.4            | 1.8 | 1.7 | 2.1 | 2.4 |
| 8H  | 3.7              | 4.1 | 4.1 | 4.4 | 4.8 | 1.3            | 1.7 | 1.7 | 2.0 | 2.4 |
| 12H   | 3.7              | 4.0 | 4.1 | 4.4 | 4.8 | 1.3            | 1.6 | 1.7 | 2.0 | 2.3 |
| 8H 4H   | 3.7              | 4.1 | 4.1 | 4.4 | 4.8 | 1.5            | 1.8 | 1.8 | 2.2 | 2.5 |
| 6H  | 3.7              | 4.0 | 4.1 | 4.4 | 4.8 | 1.4            | 1.7 | 1.8 | 2.1 | 2.5 |
| 8H  | 3.7              | 3.9 | 4.1 | 4.3 | 4.8 | 1.3            | 1.6 | 1.8 | 2.0 | 2.5 |
| 12H   | 3.6              | 3.8 | 4.1 | 4.3 | 4.7 | 1.3            | 1.5 | 1.7 | 1.9 | 2.4 |
| 12H 4H  | 3.6              | 4.0 | 4.0 | 4.3 | 4.7 | 1.4            | 1.7 | 1.8 | 2.1 | 2.5 |
| 6H  | 3.6              | 3.9 | 4.1 | 4.3 | 4.8 | 1.3            | 1.6 | 1.8 | 2.0 | 2.5 |
| 8H  | 3.6              | 3.8 | 4.1 | 4.3 | 4.7 | 1.3            | 1.5 | 1.7 | 2.0 | 2.4 |
| <b>Variations with the observer position at spacings:</b> |                  |     |     |     |     |                |     |     |     |     |
| S = 1.0H  | + 0.7 / - 0.9    |     |     |     |     | + 0.8 / - 1.2  |     |     |     |     |
| 1.5H  | + 0.9 / - 1.0    |     |     |     |     | + 0.7 / - 1.1  |     |     |     |     |
| 2.0H  | + 0.5 / - 1.4    |     |     |     |     | + 1.3 / - 2.3  |     |     |     |     |

CIE Pub.117 Corrected 2905 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.7)



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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)****UTILIZATION FACTORS TABLE**

| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |                |     |     |        |
| $k = 0.60$                       | 90   | 84  | 80        | 89  | 84  | 80  | 89             | 83  | 80  | 77     |
| 0.80                             | 97   | 91  | 88        | 96  | 91  | 88  | 96             | 91  | 87  | 84     |
| 1.00                             | 101  | 96  | 92        | 100 | 95  | 92  | 98             | 95  | 91  | 88     |
| 1.25                             | 104  | 100 | 96        | 103 | 99  | 96  | 102            | 98  | 95  | 91     |
| 1.50                             | 107  | 103 | 100       | 106 | 102 | 99  | 104            | 100 | 98  | 94     |
| 2.00                             | 109  | 105 | 102       | 108 | 104 | 102 | 105            | 102 | 100 | 95     |
| 2.50                             | 111  | 107 | 105       | 109 | 106 | 104 | 106            | 104 | 102 | 96     |
| 3.00                             | 112  | 109 | 107       | 111 | 108 | 105 | 107            | 105 | 103 | 97     |
| 4.00                             | 114  | 112 | 110       | 112 | 110 | 108 | 109            | 107 | 106 | 99     |
| 5.00                             | 115  | 113 | 112       | 113 | 112 | 110 | 109            | 108 | 107 | 100    |
| ROOM INDEX                       | UF (total)   |     |           |     |     |     |                |     |     | Direct |
| According to DIN EN 13032-2 2004 |  |     | Suspended |     |     |     | SERNOCH = 1.25 |     |     |        |



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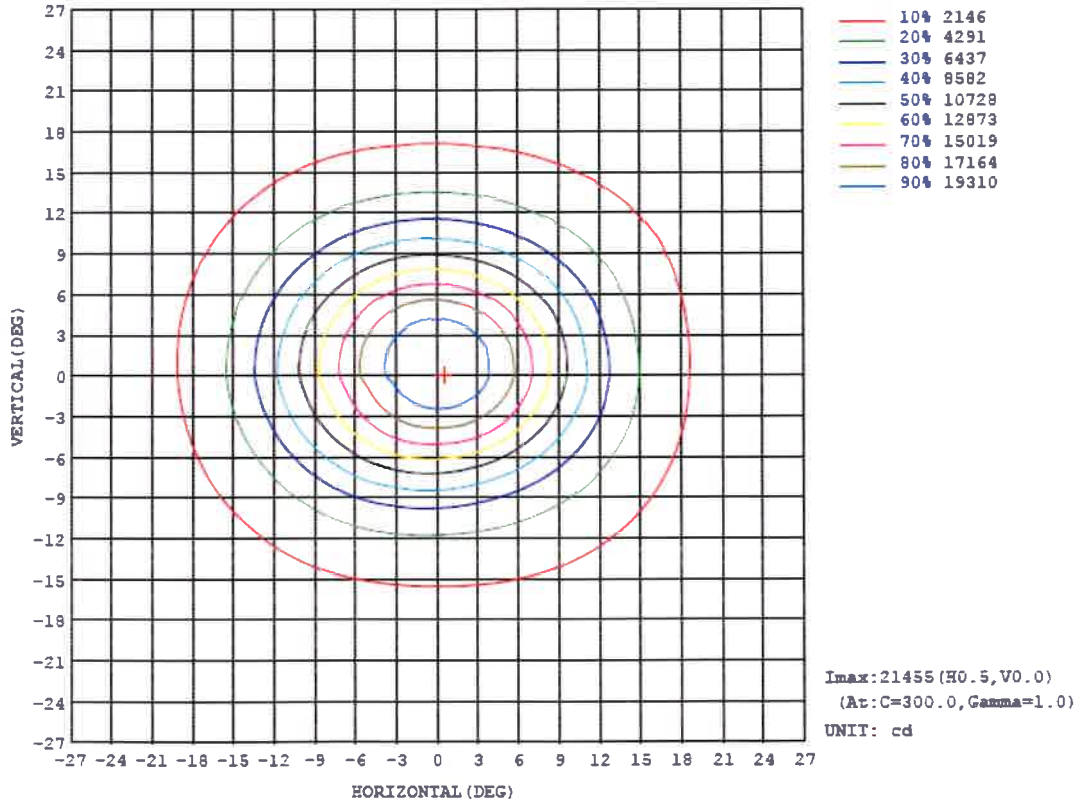
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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW )**

**ISOCANDELA DIAGRAM**



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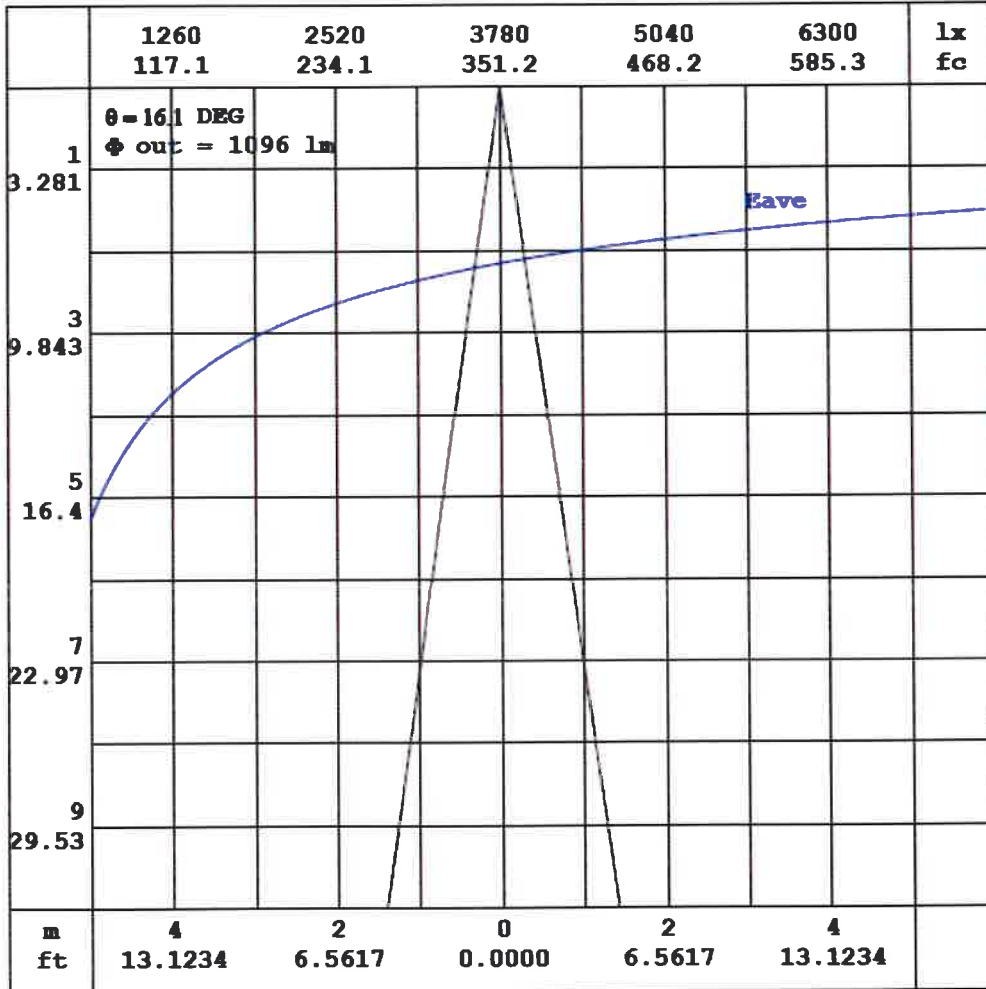
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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)****AAI CURVES**

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



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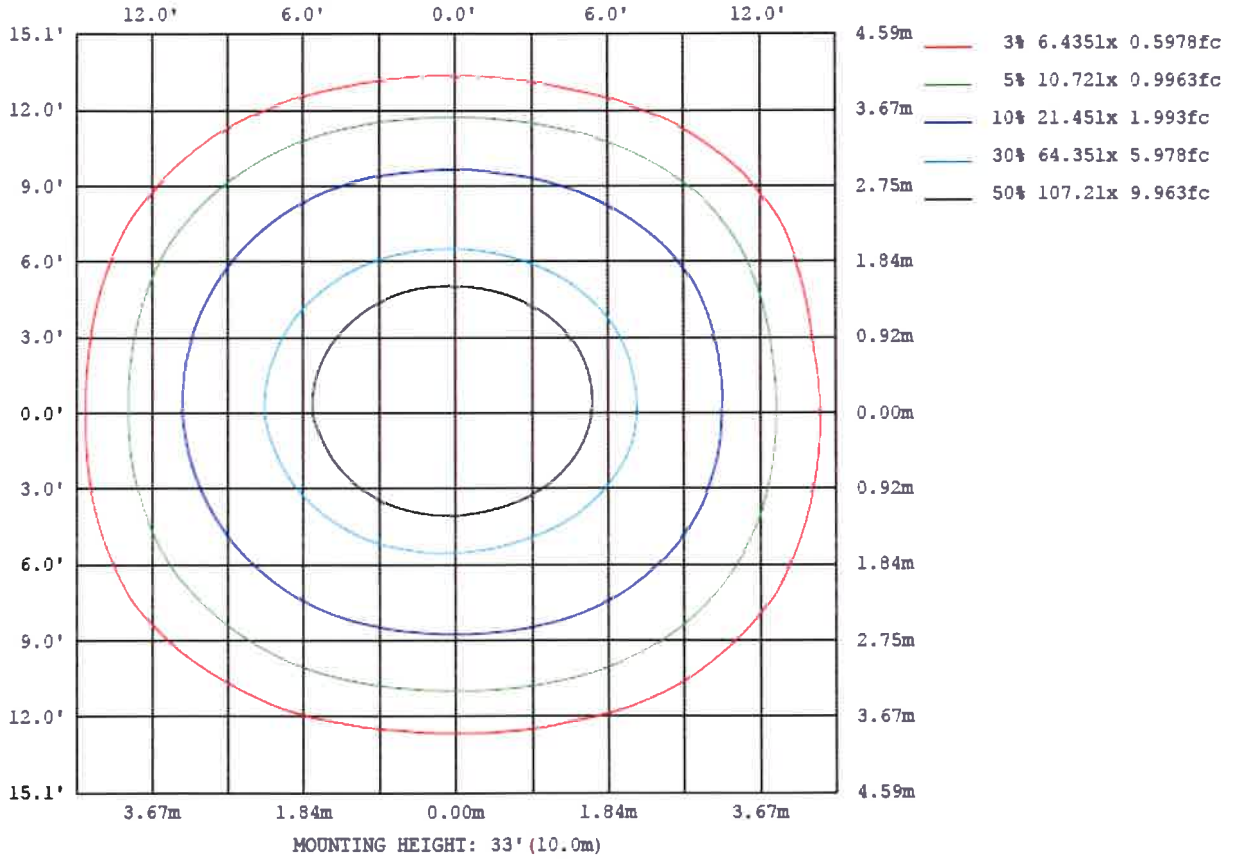
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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)**

**ISOLUX DIAGRAM**



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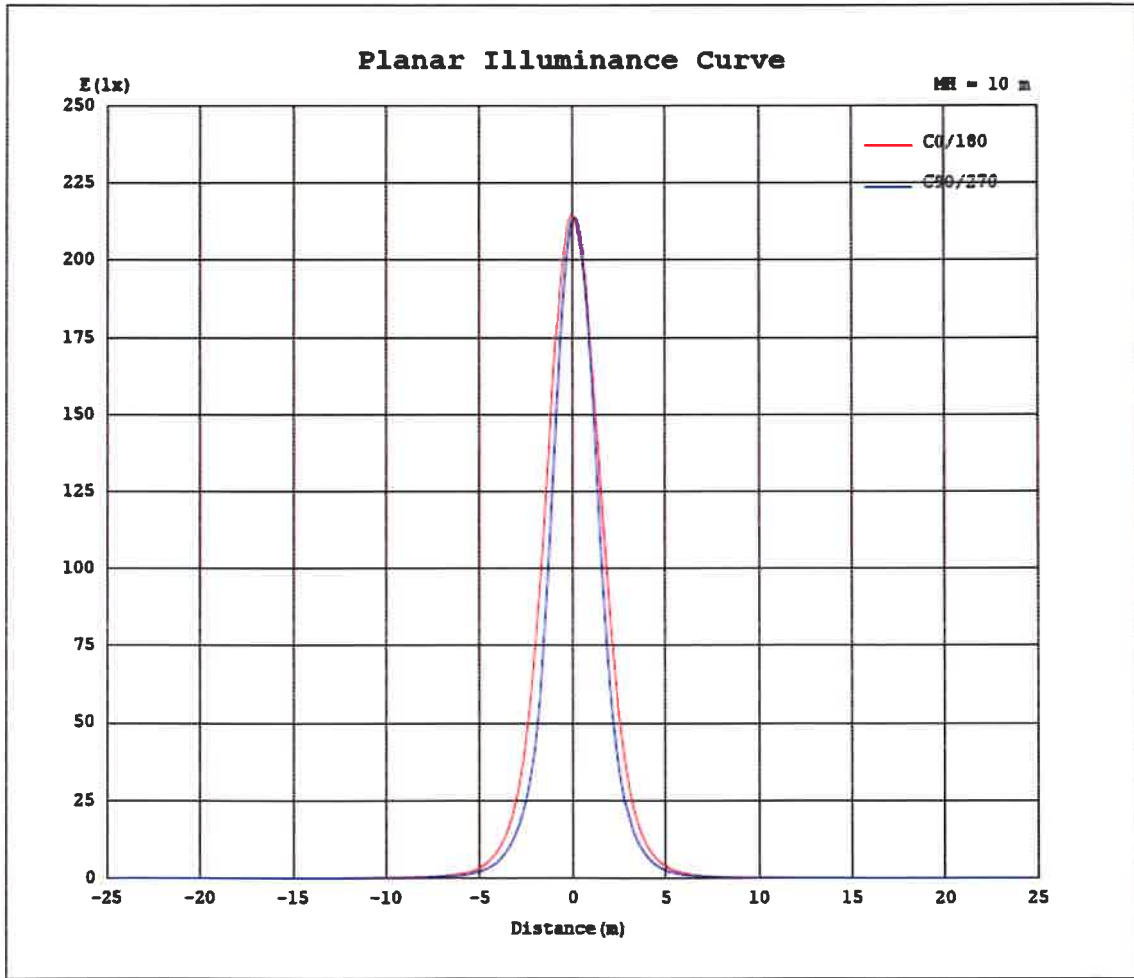
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**2.1 CW Fotometrik Deney Sonuçları (Photometric Test Results of the CW)**



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**2.2 CW Spektrokolorimetrik Deney Sonuçları (spectrocolorimetric Test Results of the CW)****Elektriksel Ölçümler**

(Electrical Measurements)

|   |                 |
|---|-----------------|
| <b>Ölçülen Güç (W)</b><br>(Input Power)   | 44,50 W         |
| <b>Ölçülen Gerilim (V)</b><br>(Input Voltage)                                   | 46,86 VDC       |
| <b>Ölçülen Akım (A)</b><br>(Input Current)                                      | 0,95 A          |
| <b>Güç Faktörü (PF)</b><br>(Power Factor)                                       | -               |
| <b>Ölçülen Frekans (Hz)</b><br>(Input Frequency)                                | -               |
| <b>Ortam Sıcaklığı / Bağıl Nem</b><br>(Ambient Temperature / Relative Humidity) | 25 °C<br>48% Rh |
| <b>Stabilizasyon Süresi</b><br>(Stabilization Time)                             | 60 dk ±5dk      |

**Spektrokolorimetrik Ölçüm Sonuçları**

(Spectrocolorimetric Measurement Results)

|                           |        |
|---------------------------|--------|
| <b>Chrom x</b>            | 0,3129 |
| <b>Chrom y</b>            | 0,3302 |
| <b>Duv</b>                | 0,0037 |
| <b>Chrom u'</b>           | 0,1975 |
| <b>Chrom v'</b>           | 0,4690 |
| <b>Peak</b>               | 445 nm |
| <b>Dominant</b>           | 490 nm |
| <b>CCT</b>                | 6486 K |
| <b>Nominal CCT</b>        | -      |
| <b>Ra(CRI)</b>            | 71     |
| <b>R9</b>                 | -26    |
| <b>S/P Ratio</b>          | 2,0    |
| <b>Preburning time</b>    | 1 hr   |
| <b>Test Configuration</b> | 4π     |





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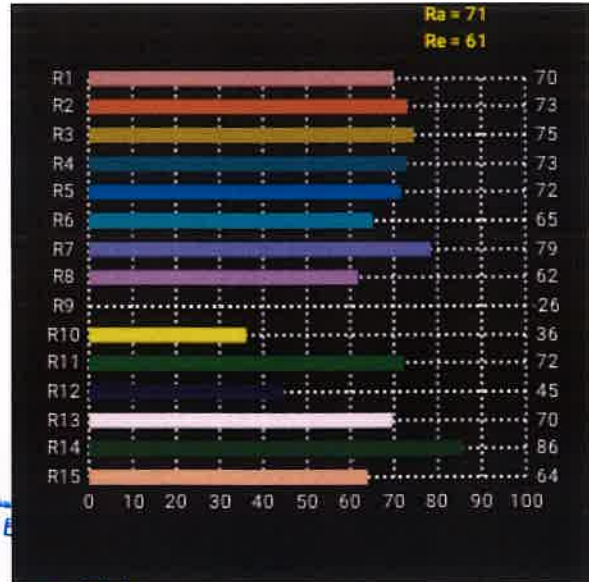
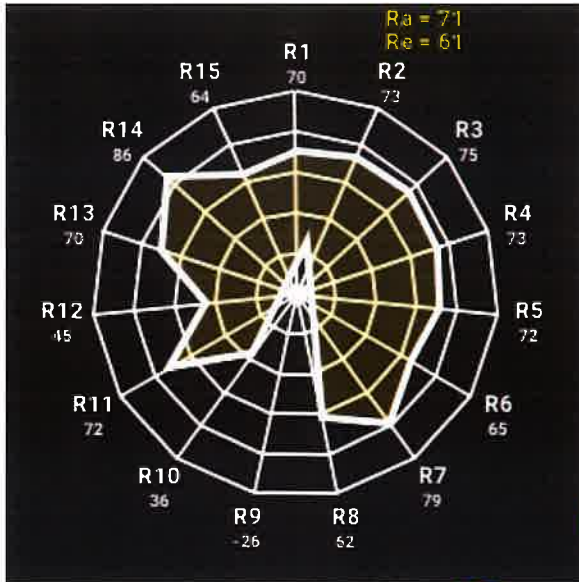
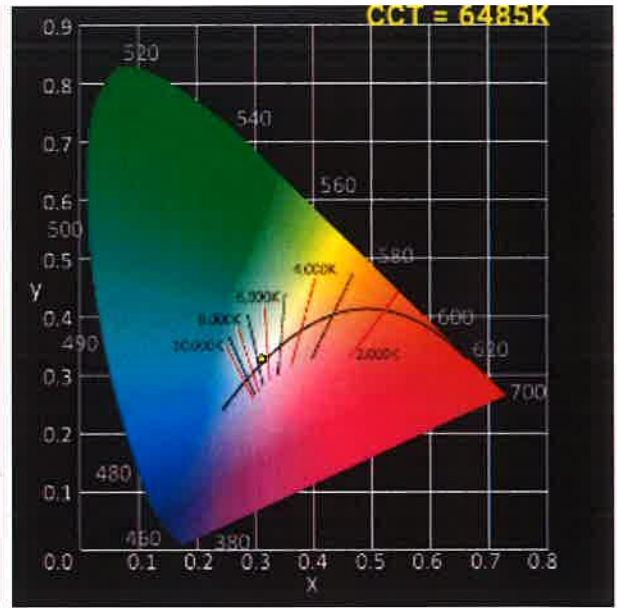
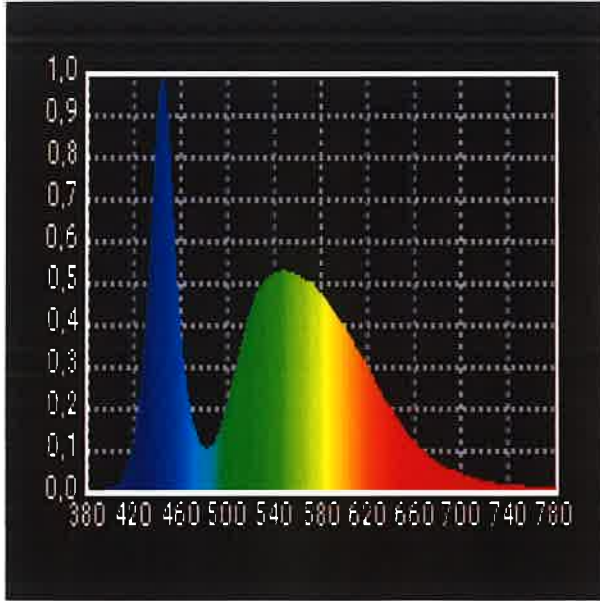
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**2.2 CW Spektrokolorimetrik Deney Sonuçları (spectrocolorimetric Test Results of the CW)**

**Spectral Power Distribution**



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**3.1 DGC'nin Fotoğrafları (Photos of EUT)**



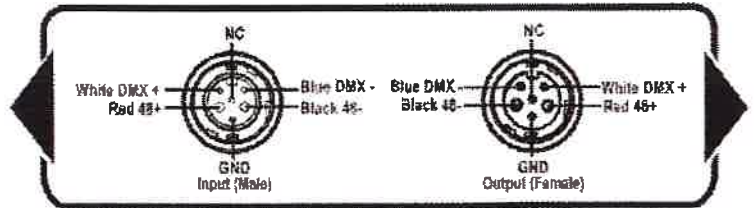
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CE FC III

RoHS compliant IP67



P02022051 Leoline® S12 915mm DMX SC Linear Spot Beam 14°  
48V DC / Max. 0.96A / Max. 46W  
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