

22/05/2015

Sayı/Issue: 05 06 15 SÖ 074/00

İlgi/Subject:

Interest on request, samples were sent to our laboratory for lighting fixtures, physical examination and tests. The following results were obtained.

Rapor Tarihi-Report Date / Rapor Numarası-Report Number/ Ticari Marka-TradeMark/Model-Type

22.06.2015 / 15-125 / ODSER ELEKTRONİK / AAAA-127-CB30TNN-BBB

AAAA: Ürün Serisi

6101, 6103, 9101, 9102, 9104, 9303, 9700, 9701, 9707

BBB: Işık Dağılımı

015, 024, 036, 048, 120(reflektörsüz)

Numbers in above-mentioned report, the date of the inspection and test reports of the samples will be sent to our letter attached.

Best Regards ,

Prof.Dr. Zafer UTLU

Laboratory Manager

EK/EKLER:

(ANNEX/ANNEXES)

Not: Muayene ve Deney amacı ile gönderilen numuneler, firma veya yetkilisi tarafından 30 gün içerisinde alınmadığı takdirde tasfiye edilecektir.

The samples are sent in order to inspection and test, will be liquidated if it will taken back within 30days by representative of company.



MUAYENE VE DENEY RAPORU

TEST REPORT

IAU
15-125
22.06.2015

Deneyi Talep Eden

: ODSEL LEKTRONİK SAN. Ve TİC. A.Ş.

(Adı,Adresi,Şehir v.b.)

Orta Ölçekli Sanayi Bölgesi, 14.Sokak No:4 Muradiye 45140 Manisa / TÜRKİYE

Customer (Name,Address, City etc.)

Deney Talep Tarihi /No

: 05.06.2015

Order Date /No

Numunenin Kabul Tarihi

: 05.06.2015

Test Item Receipt Date

Deneylerin Yapıldığı Tarih

: 22.05.2015

Date of Test

Uygulanan Standart /Metod

: TS EN13032-1:2004 +A1:2012LightandLighting –Measurement and Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File

Applied Standart/Method

Raporun Sayfa Sayısı

: 33

Number of Pages of the report

Açıklamalar

:

Deney ve/veya ölçüm sonuçları,genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metodları bu raporun 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.

Mühür

Seal

Tarih

Date

Deney Sorumlusu

Person in charge of tests

Sercan ÖZKAN

Lab. Tech.

Kontrol Eden

Reviewer

Temel SÖNMEZOCAK

Quality Manager

Onaylayan

Approved By

Prof.Dr. Zafer UTLU

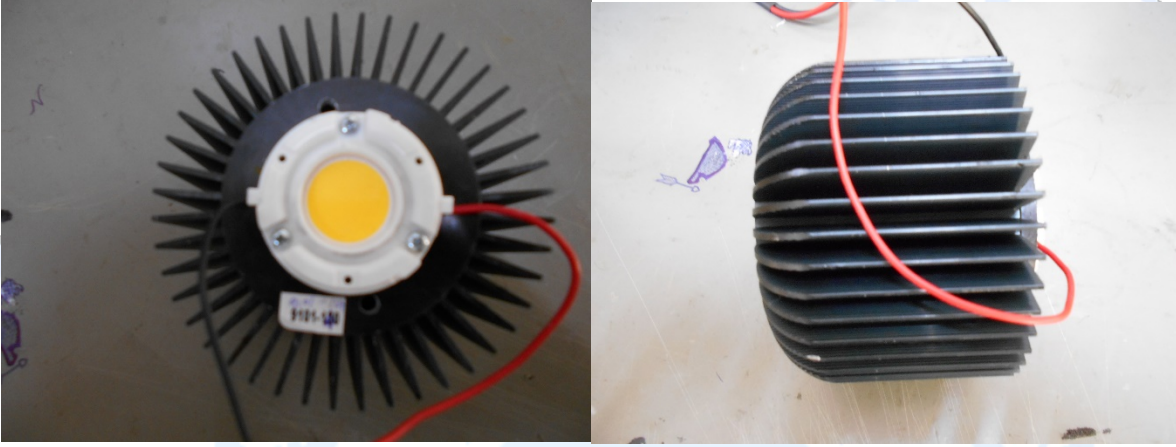
Lab. Manager

Bu rapor , hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürsüz raporlar geçersizdir. Bu rapor , sadece deneyiyapılan numune için geçerlidir ve "Ürün Belgesi" yerine geçmez.

This test report shall not be reproduced other than in fill except with the written permission of the laboratory .Test reports without signature and seal are not valid. This report represents only tested samples,and shall not be used as product Certificate.

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Numunenin fotoğrafları / Photos of the Test Sample



İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS**FOTOMETRİK ÖLÇÜM SONUÇLARI****PHOTOMETRIC MEASUREMEN RESULTS**

Kullanılan Cihaz/EquipmentUsed.....:	NFMS Goniophotometer LabSphere Sphere System
Uygulanan Standart-Metot/Applied Standard-Method.....:	TS EN13032-1:2004 +A1:2012LightandLighting – Measurementand Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File.
Deney Ortam Şartları/ExperimentalAmbientConditions.....:	25°C ±5°C, 35%RH±5%RH
Armatüre Uygulanan Gerilim / AppliedVoltage.....:	220V
Armatür Markası-Üretici /LuminaireBrand-Producer.....:	ODSEL LEKTRONİK
Armatür Kodu-Modeli / LuminaireCode-Model.....:	6101-127-CB830TNN-120, 6103-127-CB830TNN-120 9101-127-CB830TNN-120, 9102-127-CB830TNN-120 9104-127-CB830TNN-120, 9303-127-CB830TNN-120 9700-127-CB830TNN-120, 9701-127-CB830TNN-120 9707-127-CB830TNN-120
Armatür Lamba Tipi-açıklama/Lamptype-description of Luminaire.....:	LED SPOT

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Armatürde Ölçülen Toplam Güç/Measured Total Power of Luminaire.....:	27 W
Armatürün Ölçülen Işık Akısı /Measured Luminous Flux of Luminaire.....:	3493 lm (Effective Value)
Lamba Katalog Işık Akısı / Lamp Catalog Luminous Flux.....:	--
Armatür verimliliği (lm/Watt) / Luminous efficacy.....:	129,37 lm/Watt
Armatür Geri Verim (LOR)% / Luminous efficacy %.....:	--

FOTOMETRİK ÖLÇÜM BELİRSİZLİK TABLOSU / PHOTOMETRIC MEASUREMENT UNCERTAINTY BUDGET

Deney/Test(Unit)	Ölçüm Belirsizliği/Uncertainty
Radiant Flux (Watt)	1,3%
Luminous flux (Lumen / Lm)	1,08%
Correlated Color Temperature [CCT – Kelvin(K)]	7K
Chromaticity x coord	0,02
Chromaticity y coord	0,02
Chromaticity u' coord	0,02
Chromaticity v' coord	0,02
Color Rendering Index	1,4

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

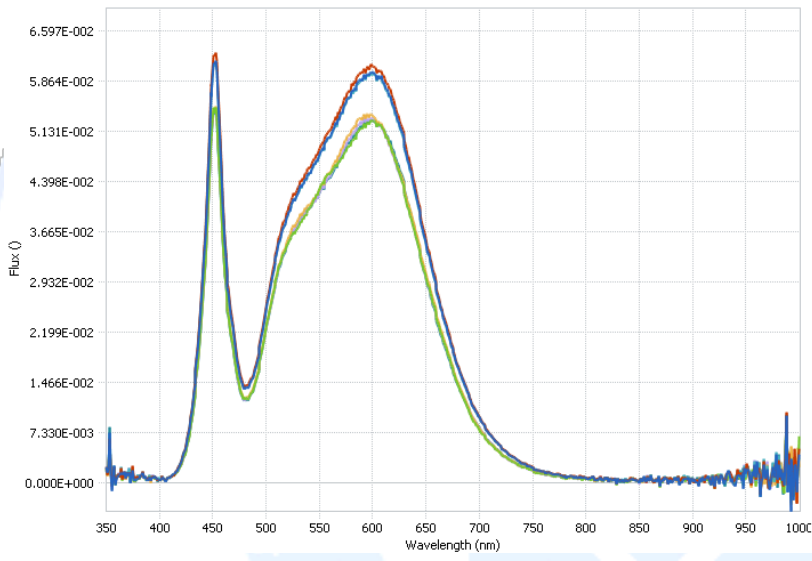
FotometrikÖlçümler / Photometric measurements

Parameter	Scan 2
Date/Time	24.06.2015 16:44
Radiant Flux (Watts)	10,99
Luminous Flux (lumens)	3493
Scotopic Luminous Flux (lm')	5615
Chromaticity x coord	0,3899
Chromaticity y coord	0,3809
Chromaticity u coord	0,2296
Chromaticity v coord	0,3365
Delta uv	0,001
Chromaticity u' coord	0,2296
Chromaticity v' coord	0,5048
Peak Wavelength (nm)	452,2
Center Wavelength (nm)	451,8
Centroid Wavelength (nm)	572,9
Dominant Wavelength (nm)	580,2
Full Width Half Max Bandwidth (nm)	21,8
Excitation Purity (%)	31,3
Correlated Color Temperature (deg. K)	3782
SDCM	57 F 6500
Correlation	0,0054
Correlation Coefficient	0,00071066
Color Rendering Index Average (RA)	83,9202273
Color Rendering Index (R1)	82,9
Color Rendering Index (R2)	89
Color Rendering Index (R3)	93,1
Color Rendering Index (R4)	83,6
Color Rendering Index (R5)	82,5
Color Rendering Index (R6)	84,5
Color Rendering Index (R7)	87,3
Color Rendering Index (R8)	68,4
Color Rendering Index (R9)	19,2
Color Rendering Index (R10)	73,3
Color Rendering Index (R11)	82,4
Color Rendering Index (R12)	62,3
Color Rendering Index (R13)	84,3
Color Rendering Index (R14)	96

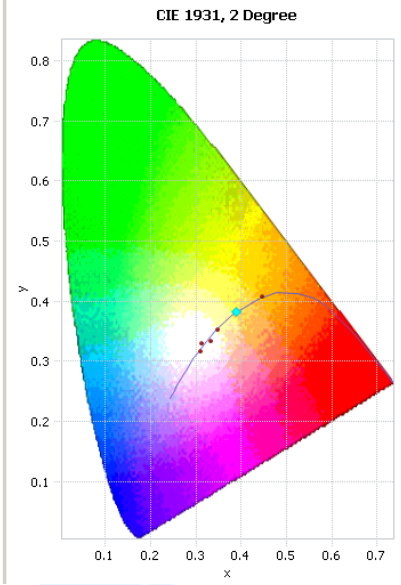
İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI**(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)**

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

▼ SPECTRAL FLUX GRAPH:

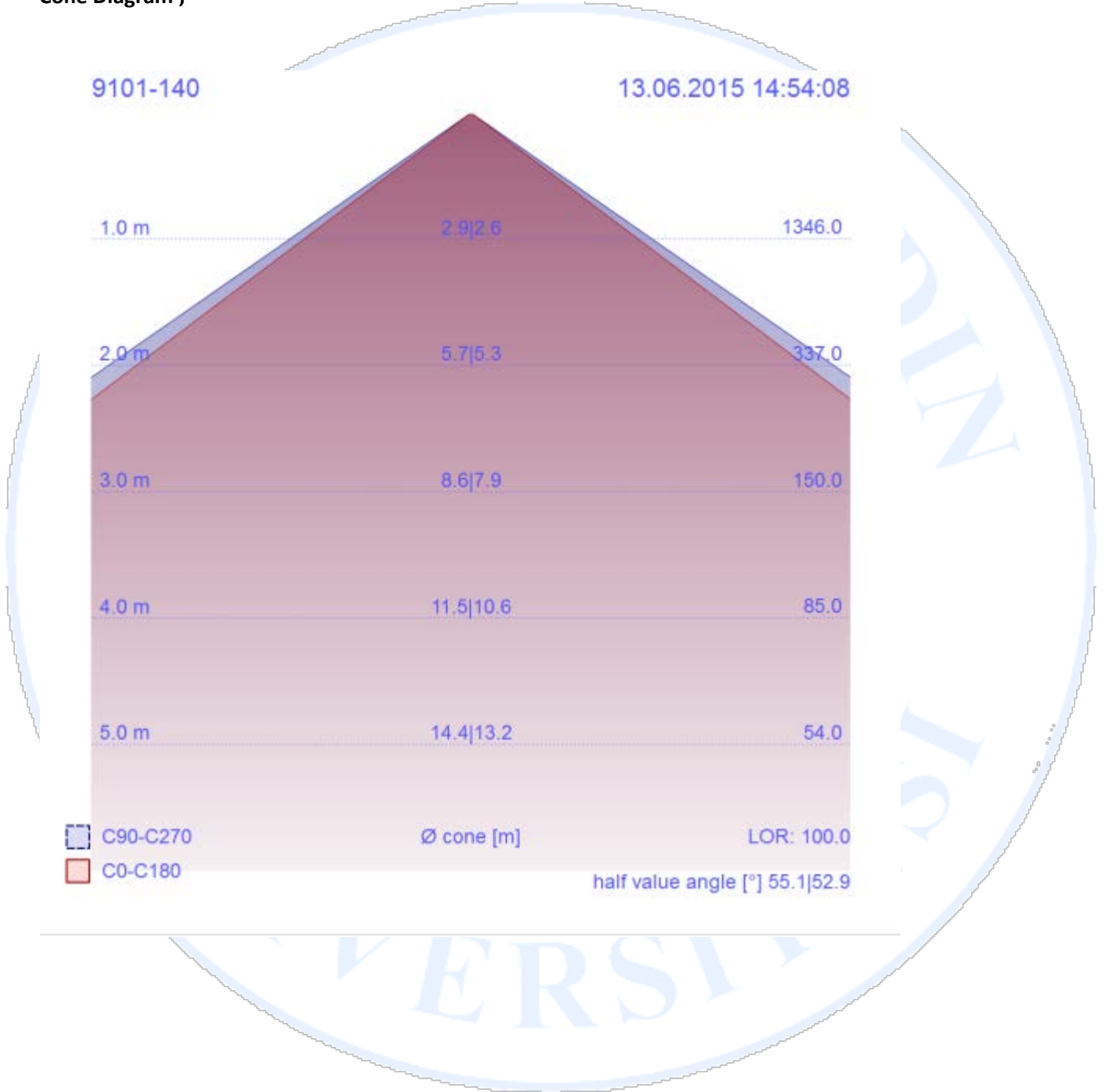


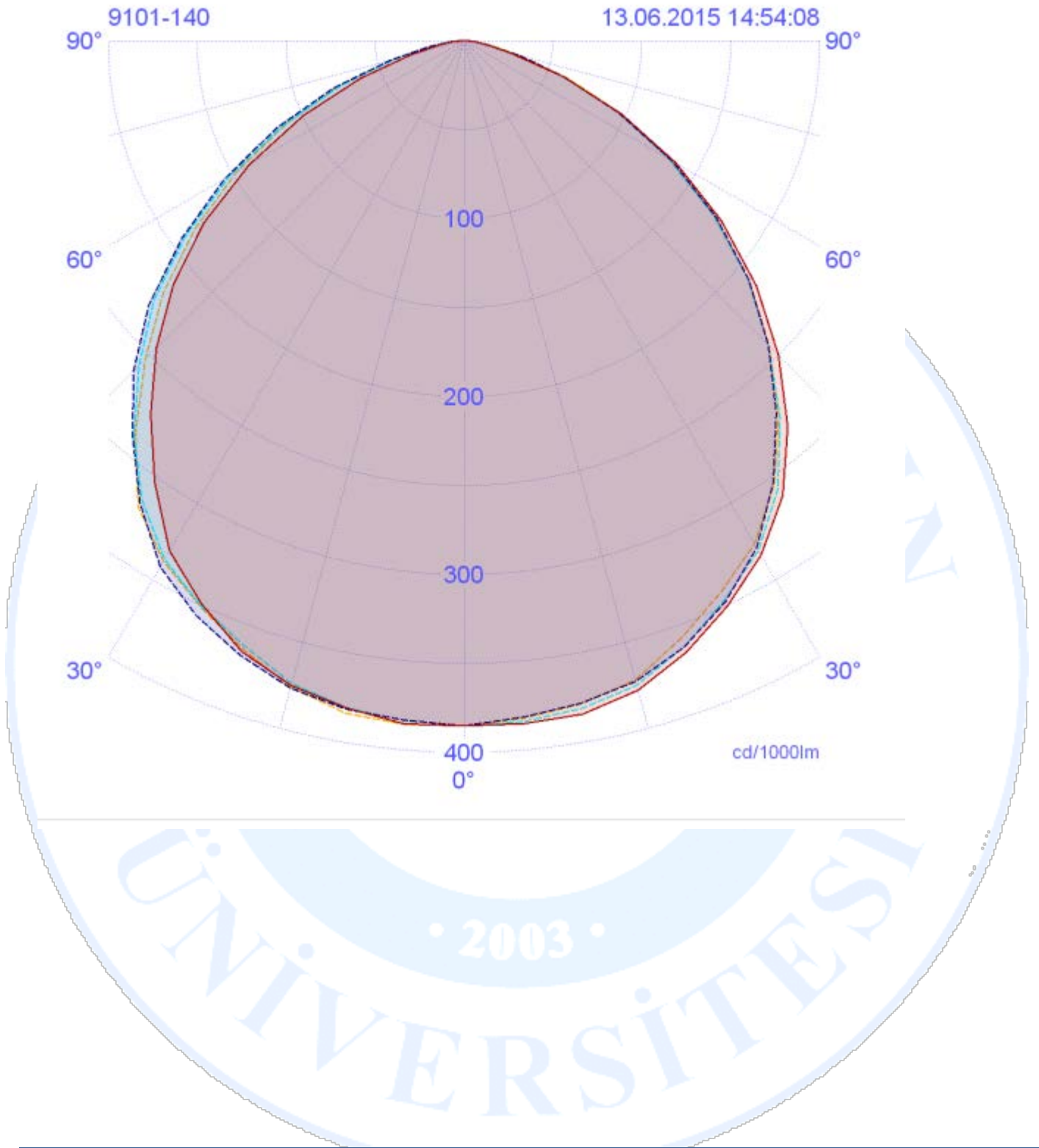
▼ CHROMATICITY DIAGRAM:



MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Cone Diagram ;





İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI

PHOTOMETRIC MEASUREMMENT RESULTS

Kullanılan Cihaz/EquipmentUsed.....:	NFMS Goniophotometer LabSphere Sphere System
Uygulanan Standart-Metot/Applied Standard-Method.....:	TS EN13032-1:2004 +A1:2012LightandLighting – Measurementand Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File.
Deney Ortam Şartları/ExperimentalAmbientConditions.....:	25°C ±5°C, 35%RH±5%RH
Armatüre Uygulanan Gerilim / AppliedVoltage.....:	220V
Armatür Markası-Üretici /LuminaireBrand-Producer.....:	ODSEL LEKTRONİK
Armatür Kodu-Modeli / LuminaireCode-Model.....:	6101-127-CB830TNN-048, 6103-127-CB830TNN-048 9101-127-CB830TNN-048, 9102-127-CB830TNN-048 9104-127-CB830TNN-048, 9303-127-CB830TNN-048 9700-127-CB830TNN-048, 9701-127-CB830TNN-048 9707-127-CB830TNN-048
Armatür Lamba Tipi-açıklama/Lamptype-description of Luminaire.....:	LED SPOT

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI / PHOTOMETRIC MEASUREMENT RESULTS

Armatürde Ölçülen Toplam Güç/Measured Total Power of Luminaire.....:	27 W
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Armatürün Ölçülen Işık Akısı / Measured Luminous Flux of Luminaire.....:	3031 lm (Effective Value)
Lamba Katalog Işık Akısı / Lamp Catalog Luminous Flux.....:	--
Armatür verimliliği (lm/Watt) / Luminous efficacy.....:	112,26 lm/Watt
Armatür Geri Verim (LOR)% / Luminous efficacy %.....:	--

FOTOMETRİK ÖLÇÜM BELİRSİZLİK TABLOSU / PHOTOMETRIC MEASUREMENT UNCERTAINTY BUDGET

Deney/Test(Unit)	Ölçüm Belirsizliği/Uncertainty
Radiant Flux (Watt)	1,3%
Luminous flux (Lumen / lm)	1,08%
Correlated Color Temperature [CCT – Kelvin(K)]	7K
Chromaticity x coord	0,02
Chromaticity y coord	0,02
Chromaticity u' coord	0,02
Chromaticity v' coord	0,02
Color Rendering Index	1,4

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Fotometrik Ölçümler / Photometric measurements

Parameter	Scan 4
Date/Time	24.06.2015 16:48
Radiant Flux (Watts)	9,445
Luminous Flux (lumens)	3031

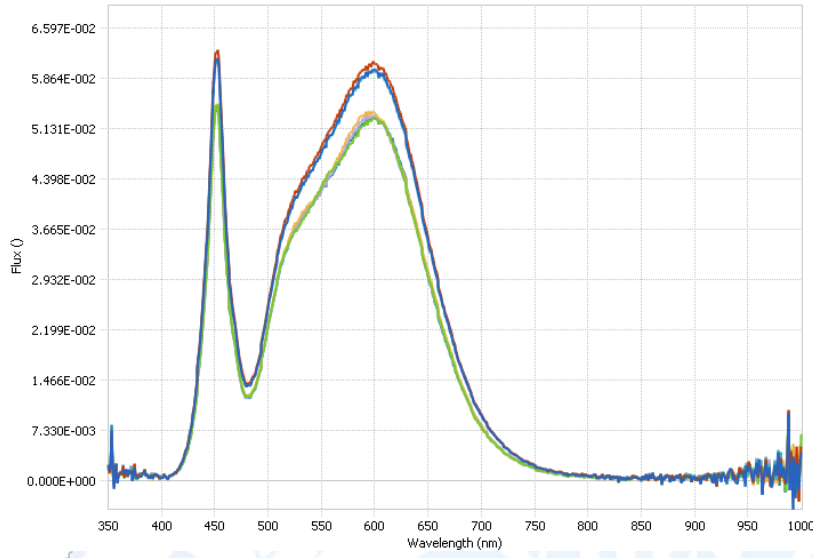
Scotopic Luminous Flux (lm')	4891
Chromaticity x coord	0,3886
Chromaticity y coord	0,3818
Chromaticity u coord	0,2285
Chromaticity v coord	0,3367
Delta uv	0,0002
Chromaticity u' coord	0,2285
Chromaticity v' coord	0,505
Peak Wavelength (nm)	452,1
Center Wavelength (nm)	451,6
Centroid Wavelength (nm)	571,6
Dominant Wavelength (nm)	579,7
Full Width Half Max Bandwidth (nm)	21,8
Excitation Purity (%)	31,2
Correlated Color Temperature (deg. K)	3820
SDCM	55.8 F 6500
Correlation	0,0054
Correlation Coefficient	0,000142037
Color Rendering Index Average (RA)	83,44544525
Color Rendering Index (R1)	82,4
Color Rendering Index (R2)	88,5
Color Rendering Index (R3)	93
Color Rendering Index (R4)	83,2
Color Rendering Index (R5)	81,9
Color Rendering Index (R6)	83,9
Color Rendering Index (R7)	87,2
Color Rendering Index (R8)	67,4
Color Rendering Index (R9)	16,1
Color Rendering Index (R10)	72,3
Color Rendering Index (R11)	82
Color Rendering Index (R12)	61,2
Color Rendering Index (R13)	83,7
Color Rendering Index (R14)	95,9

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

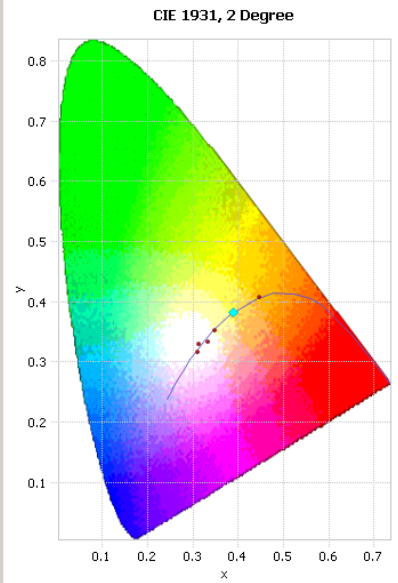
(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

▼ SPECTRAL FLUX GRAPH:



▼ CHROMATICITY DIAGRAM:

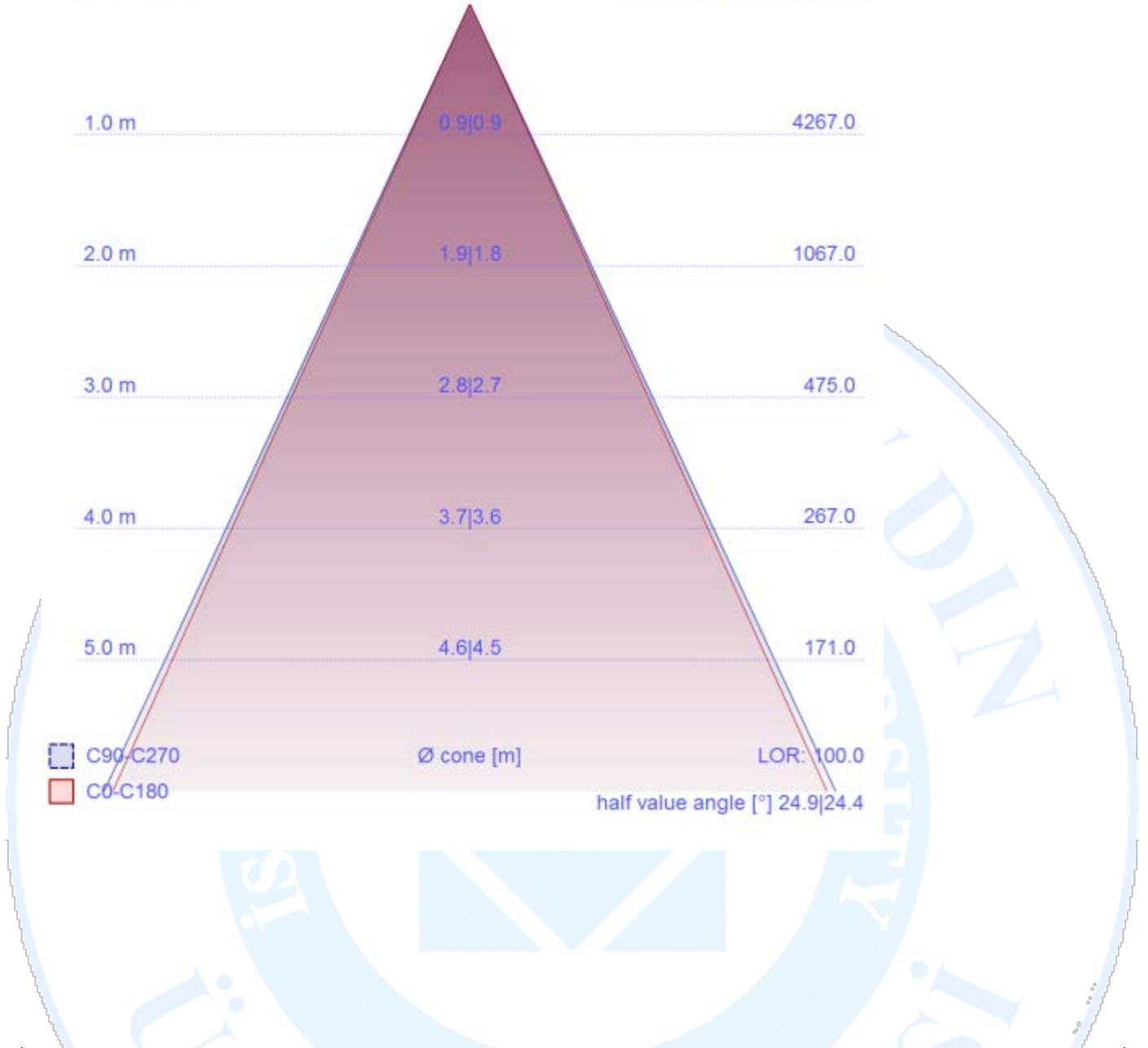


İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

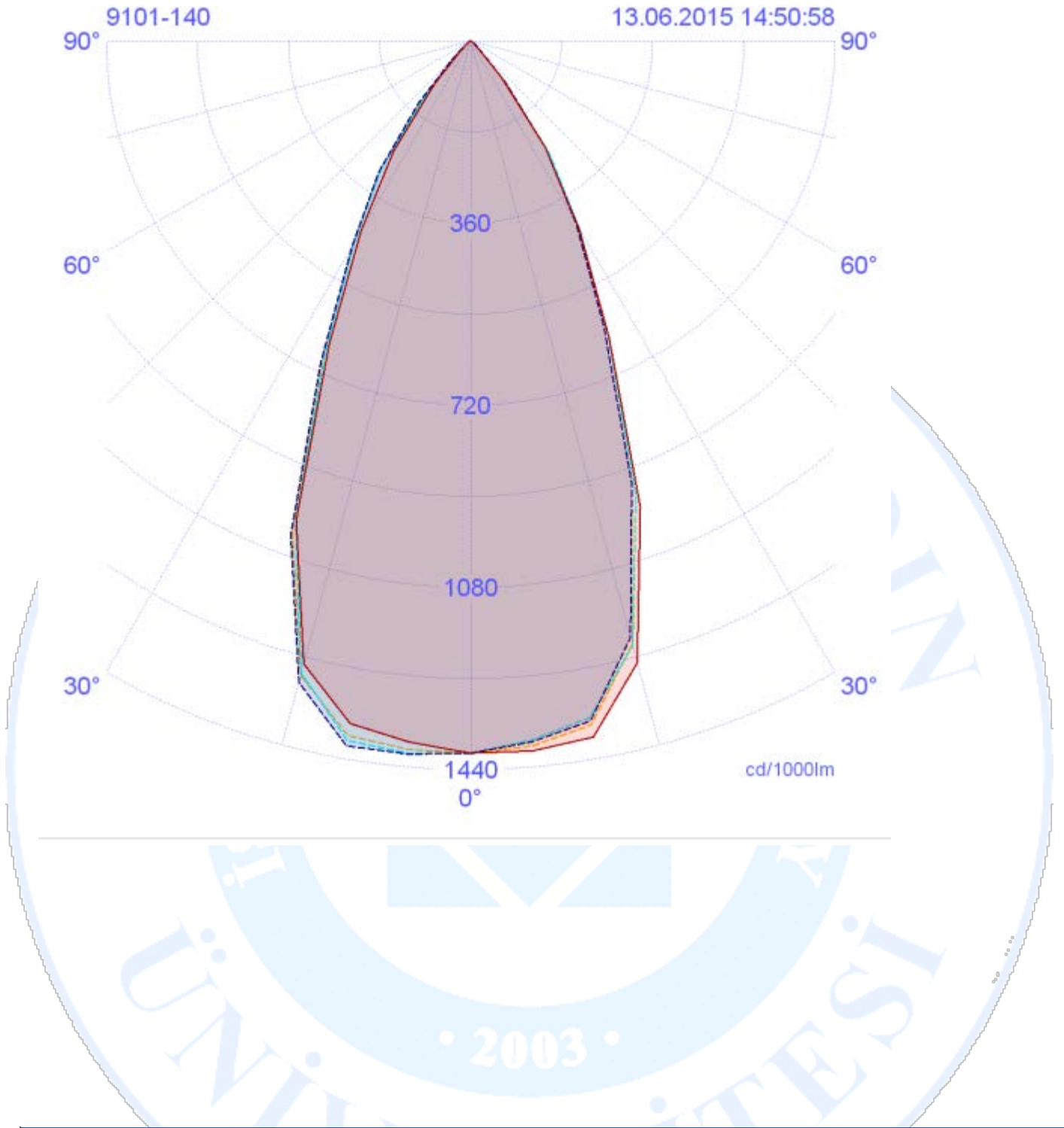
MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Cone Diagram ;

**İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI**

(*ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES*)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS



İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI

PHOTOMETRIC MEASUREMNT RESULTS

Kullanılan Cihaz/EquipmentUsed.....:

NFMS Goniophotometer
LabSphere Sphere System

Uygulanan Standart-Metot/Applied Standard-Method.....:	TS EN13032-1:2004 +A1:2012LightandLighting – Measurementand Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File.
Deney Ortam Şartları/ExperimentalAmbientConditions.....:	25°C ±5°C, 35%RH±5%RH
Armatüre Uygulanan Gerilim / AppliedVoltage.....:	220V
Armatür Markası-Üretici /LuminaireBrand-Producer.....:	ODSEL LEKTRONİK
Armatür Kodu-Modeli / LuminaireCode-Model.....:	6101-127-CB830TNN-036, 6103-127-CB830TNN-036 9101-127-CB830TNN-036, 9102-127-CB830TNN-036 9104-127-CB830TNN-036, 9303-127-CB830TNN-036 9700-127-CB830TNN-036, 9701-127-CB830TNN-036 9707-127-CB830TNN-036
Armatür Lamba Tipi-açıklama/Lamptype-description of Luminaire.....:	LED SPOT

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI / PHOTOMETRIC MEASUREMENT RESULTS

Armatürde Ölçülen Toplam Güç/Measured Total Power of Luminaire.....:	27 W
Armatürün Ölçülen Işık Akısı /MeasuredLuminousFlux of Luminaire.....:	3079 lm (Effective Value)

Lamba Katalog Işık Akısı / LampCatalogLuminousFlux.....:	--
Armatür verimliliği (lm/Watt) / Luminousefficacy.....:	114,03 lm/Watt
Armatür Geri Verim (LOR)% / Luminousefficacy %.....:	--

FOTOMETRİK ÖLÇÜM BELİRSİZLİK TABLOSU / PHOTOMETRIC MEASUREMENT UNCERTAINTY BUDGET

Deney/Test(Unit)	Ölçüm Belirsizliği/Uncertainty
Radiant Flux (Watt)	1,3%
Luminous flux (Lumen / Lm)	1,08%
Correlated Color Temperature [CCT – Kelvin(K)]	7K
Chromaticity x coord	0,02
Chromaticity y coord	0,02
Chromaticity u' coord	0,02
Chromaticity v' coord	0,02
Color Rendering Index	1,4

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Fotometrik Ölçümler / Photometric measurements

Parameter	Scan 5
Date/Time	24.06.2015 16:51
Radiant Flux (Watts)	9,589

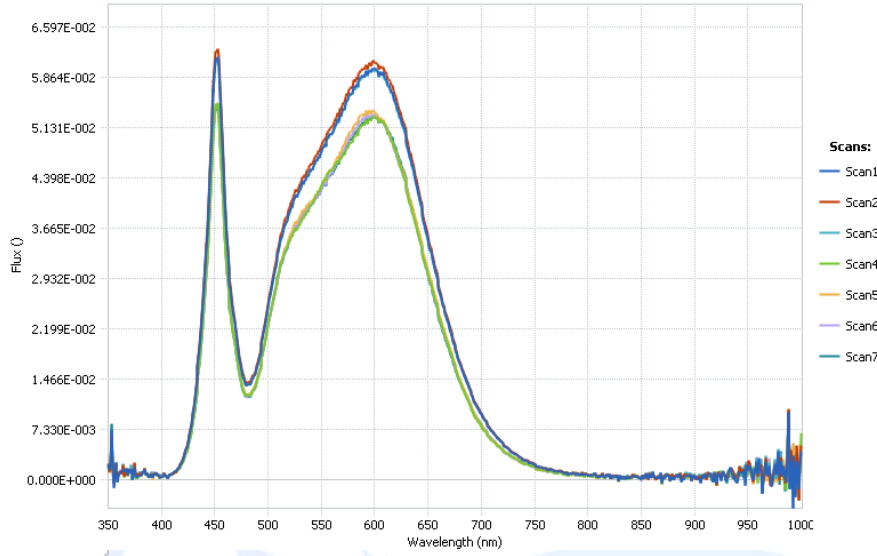
Luminous Flux (lumens)	3079
Scotopic Luminous Flux (lm')	4950
Chromaticity x coord	0,3893
Chromaticity y coord	0,3827
Chromaticity u coord	0,2285
Chromaticity v coord	0,337
Delta uv	0
Chromaticity u' coord	0,2285
Chromaticity v' coord	0,5055
Peak Wavelength (nm)	452,2
Center Wavelength (nm)	451,8
Centroid Wavelength (nm)	572,1
Dominant Wavelength (nm)	579,6
Full Width Half Max Bandwidth (nm)	21,9
Excitation Purity (%)	31,7
Correlated Color Temperature (deg. K)	3811
SDCM	56.2 F 6500
Correlation	0,0054
Correlation Coefficient	0,00030414
Color Rendering Index Average (RA)	83,07696716
Color Rendering Index (R1)	81,7
Color Rendering Index (R2)	88,3
Color Rendering Index (R3)	93,2
Color Rendering Index (R4)	82,7
Color Rendering Index (R5)	81,4
Color Rendering Index (R6)	83,7
Color Rendering Index (R7)	86,9
Color Rendering Index (R8)	66,7
Color Rendering Index (R9)	14,4
Color Rendering Index (R10)	71,9
Color Rendering Index (R11)	81,6
Color Rendering Index (R12)	60,9
Color Rendering Index (R13)	83,1
Color Rendering Index (R14)	96,1

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

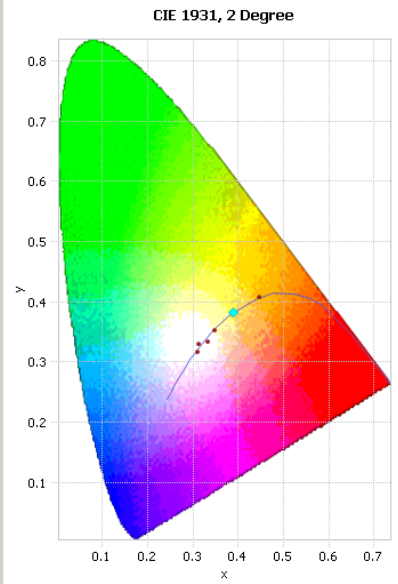
(*ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES*)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

▼ SPECTRAL FLUX GRAPH:



▼ CHROMATICITY DIAGRAM:

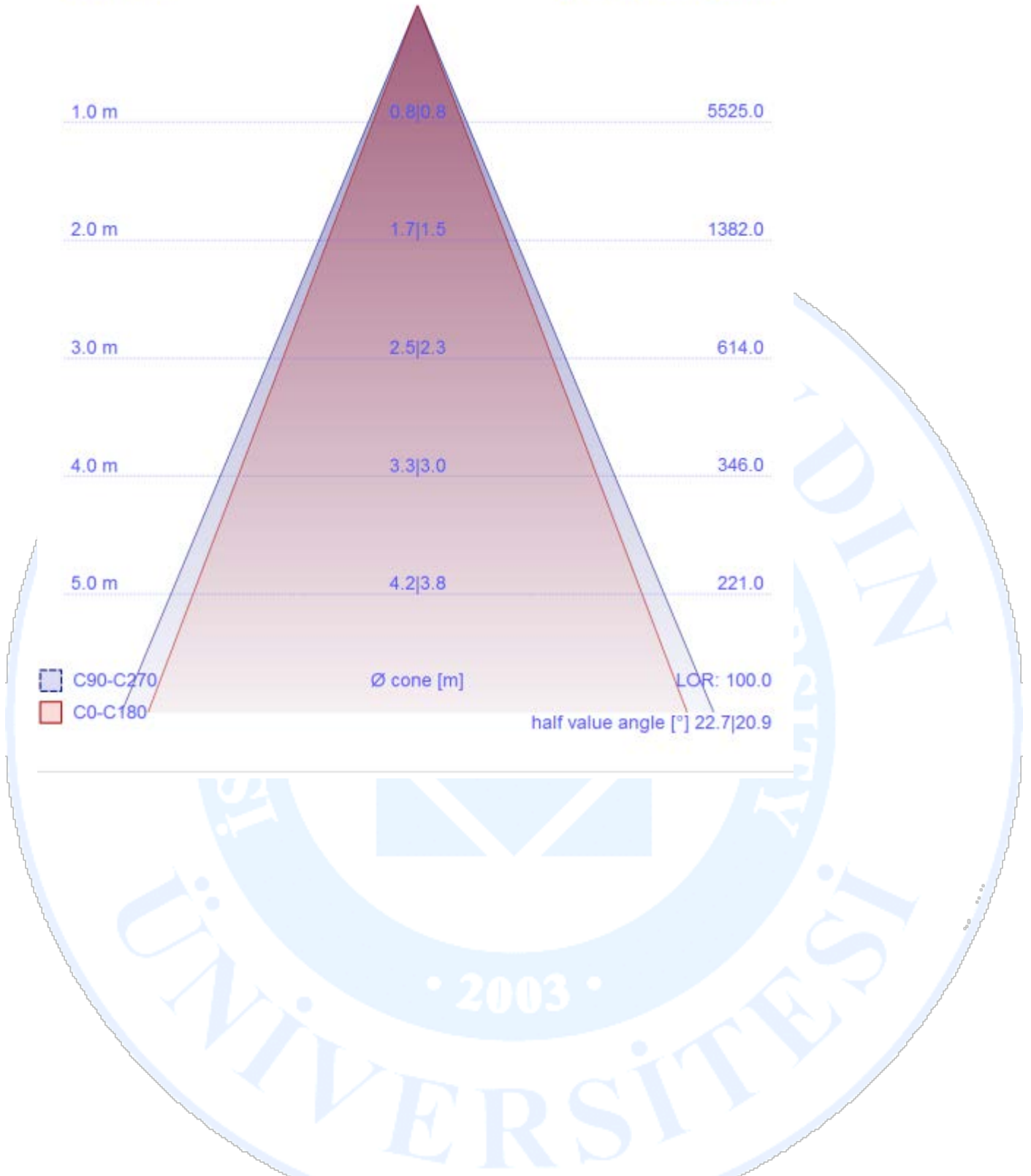


İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(İSTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

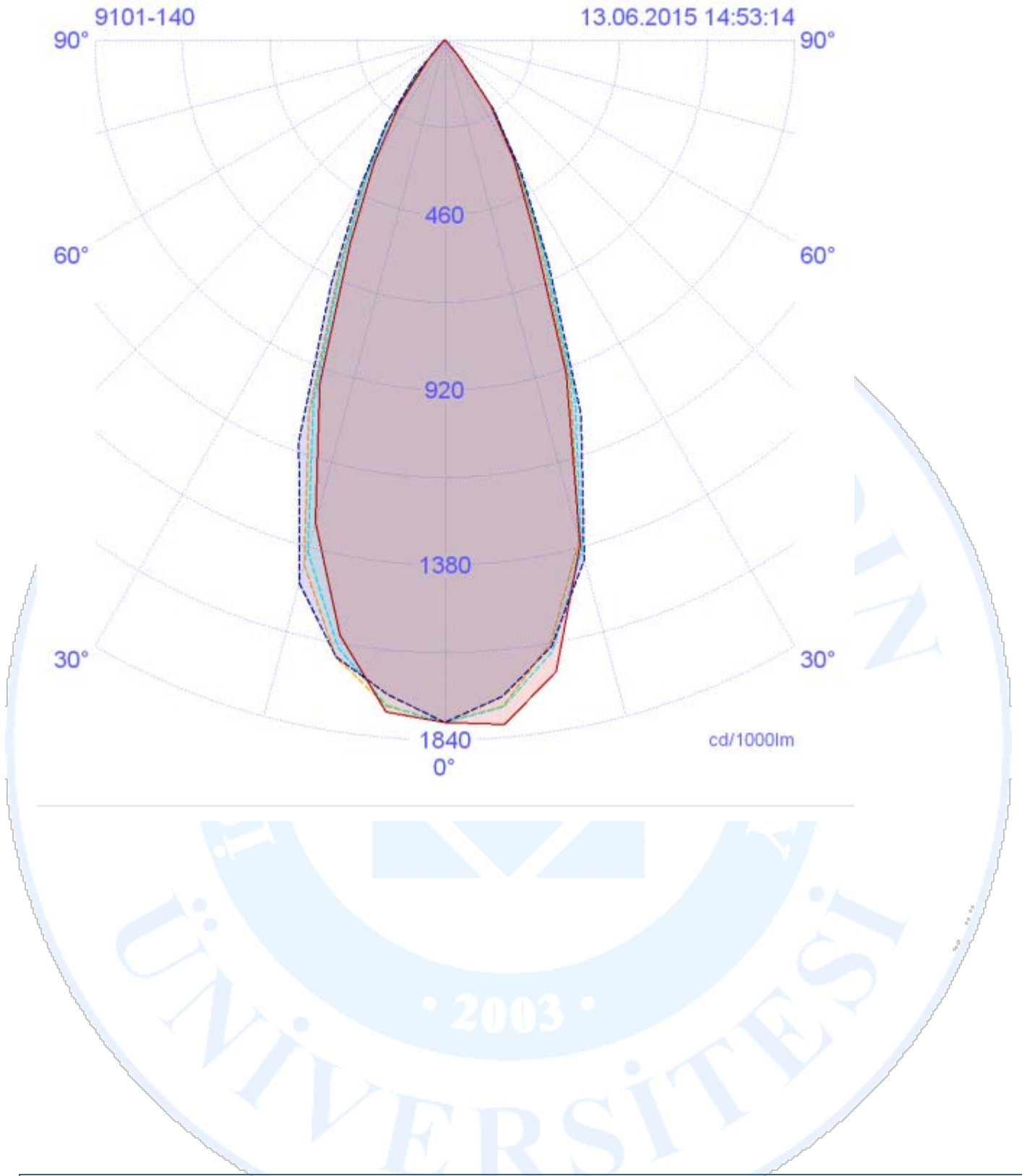
MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Cone Diagram ;

**İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI**

(*ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES*)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS



İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI

PHOTOMETRIC MEASUREMMENT RESULTS

Kullanılan Cihaz/EquipmentUsed.....:	NFMS Goniophotometer LabSphere Sphere System
Uygulanan Standart-Metot/Applied Standard-Method.....:	TS EN13032-1:2004 +A1:2012LightandLighting – Measurementand Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File.
Deney Ortam Şartları/ExperimentalAmbientConditions.....:	25°C ±5°C, 35%RH±5%RH
Armatüre Uygulanan Gerilim / AppliedVoltage.....:	220V
Armatür Markası-Üretici /LuminaireBrand-Producer.....:	ODSEL LEKTRONİK
Armatür Kodu-Modeli / LuminaireCode-Model.....:	6101-127-CB830TNN-024, 6103-127-CB830TNN-024 9101-127-CB830TNN-024, 9102-127-CB830TNN-024 9104-127-CB830TNN-024, 9303-127-CB830TNN-024 9700-127-CB830TNN-024, 9701-127-CB830TNN-024 9707-127-CB830TNN-024
Armatür Lamba Tipi-açıklama/Lamptype-description of Luminaire.....:	LED SPOT

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

(ISTANBUL AYDIN UNIVERSITY LIGHTING TEST MEASUREMENT AND ANALYSIS LABORATORIES)

MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI / PHOTOMETRIC MEASUREMENT RESULTS

Armatürde Ölçülen Toplam Güç/Measured Total Power of Luminaire.....:	27 W
Armatürün Ölçülen Işık Akısı /MeasuredLuminousFlux of Luminaire.....:	3042 lm (Effective Value)

Lamba Katalog Işık Akısı / LampCatalogLuminousFlux.....:	--
Armatür verimliliği (lm/Watt) / Luminousefficacy.....:	112,66 lm/Watt
Armatür Geri Verim (LOR)% / Luminousefficacy %.....:	--

FOTOMETRİK ÖLÇÜM BELİRSİZLİK TABLOSU / PHOTOMETRIC MEASUREMENT UNCERTAINTY BUDGET

Deney/Test(Unit)	Ölçüm Belirsizliği/Uncertainty
Radiant Flux (Watt)	1,3%
Luminous flux (Lumen / Lm)	1,08%
Correlated Color Temperature [CCT – Kelvin(K)]	7K
Chromaticity x coord	0,02
Chromaticity y coord	0,02
Chromaticity u' coord	0,02
Chromaticity v' coord	0,02
Color Rendering Index	1,4

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Fotometrik Ölçümler / Photometric measurements

Parameter	Scan 6
Date/Time	24.06.2015 16:52
Radiant Flux (Watts)	9,489
Luminous Flux (lumens)	3042

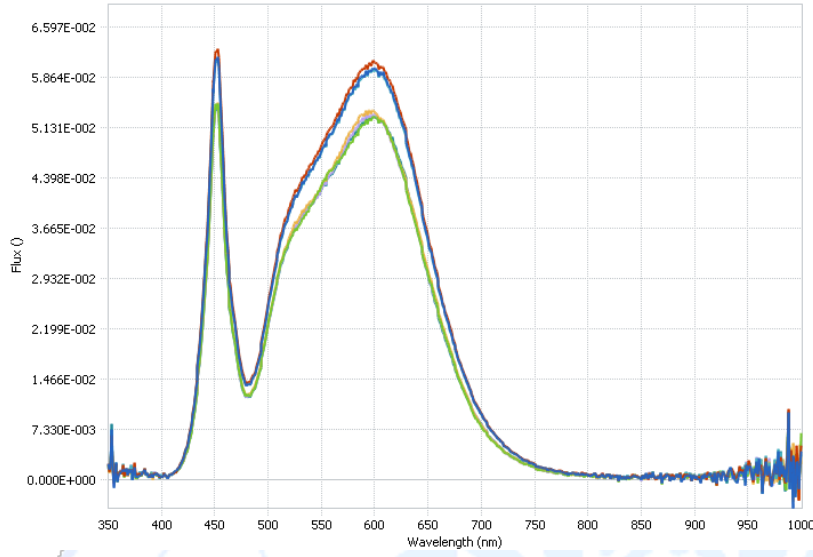
Scotopic Luminous Flux (lm')	4895
Chromaticity x coord	0,3891
Chromaticity y coord	0,3823
Chromaticity u coord	0,2286
Chromaticity v coord	0,3369
Delta uv	0,0001
Chromaticity u' coord	0,2286
Chromaticity v' coord	0,5053
Peak Wavelength (nm)	452,2
Center Wavelength (nm)	451,8
Centroid Wavelength (nm)	572,4
Dominant Wavelength (nm)	579,7
Full Width Half Max Bandwidth (nm)	21,7
Excitation Purity (%)	31,5
Correlated Color Temperature (deg. K)	3811
SDCM	56.1 F 6500
Correlation	0,0054
Correlation Coefficient	0,000206981
Color Rendering Index Average (RA)	83,12265909
Color Rendering Index (R1)	81,8
Color Rendering Index (R2)	88,4
Color Rendering Index (R3)	93,3
Color Rendering Index (R4)	82,8
Color Rendering Index (R5)	81,5
Color Rendering Index (R6)	83,8
Color Rendering Index (R7)	86,9
Color Rendering Index (R8)	66,6
Color Rendering Index (R9)	14
Color Rendering Index (R10)	72,2
Color Rendering Index (R11)	81,7
Color Rendering Index (R12)	61,1
Color Rendering Index (R13)	83,3
Color Rendering Index (R14)	96,1

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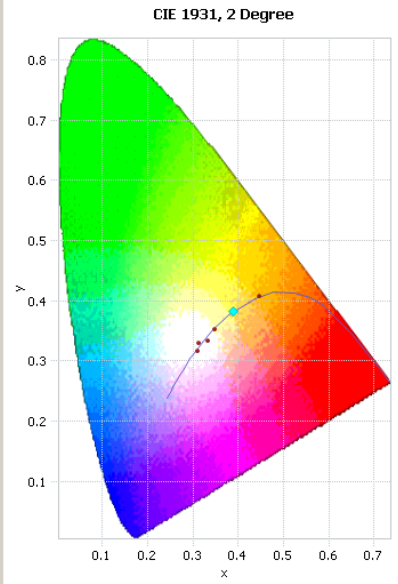
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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

▼ SPECTRAL FLUX GRAPH:



▼ CHROMATICITY DIAGRAM:



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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Cone Diagram ;

1.0 m

2.0 m

3.0 m

4.0 m

5.0 m

■ C90-C270
■ C0-C180

9101-140
90°

13.06.2015 14:52:28

90°

720

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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

2160

30°

30°

2880

0°

cd/1000lm



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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI
PHOTOMETRIC MEASUREMEN RESULTS

Kullanılan Cihaz/EquipmentUsed.....:	NFMS Goniophotometer LabSphere Sphere System
Uygulanan Standart-Metot/Applied Standard-Method.....:	TS EN13032-1:2004 +A1:2012LightandLighting – Measurementand Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File.
Deney Ortam Şartları/ExperimentalAmbientConditions.....:	25°C ±5°C, 35%RH±5%RH

Armatüre Uygulanan Gerilim / AppliedVoltage.....:	220V
Armatür Markası-Üretici /LuminaireBrand-Producer.....:	ODSEL LKTRONİK
Armatür Kodu-Modeli / LuminaireCode-Model.....:	6101-127-CB830TNN-015, 6103-127-CB830TNN-015 9101-127-CB830TNN-015, 9102-127-CB830TNN-015 9104-127-CB830TNN-015, 9303-127-CB830TNN-015 9700-127-CB830TNN-015, 9701-127-CB830TNN-015 9707-127-CB830TNN-015
Armatür Lamba Tipi-açıklama/Lamptype-description of Luminaire.....:	LED SPOT

İSTANBUL AYDIN ÜNİVERSİTESİ AYDINLATMA TEST-ÖLÇÜM ve ANALİZ LABORATUARLARI

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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

FOTOMETRİK ÖLÇÜM SONUÇLARI / PHOTOMETRIC MEASUREMENT RESULTS

Armatürde Ölçülen Toplam Güç/Measured Total Power of Luminaire.....:	27 W
Armatürün Ölçülen Işık Akısı /MeasuredLuminousFlux of Luminaire.....:	3033 lm (Effective Value)
Lamba Katalog Işık Akısı / LampCatalogLuminousFlux.....:	--
Armatür verimliliği (lm/Watt) / Luminousefficacy.....:	112,33 lm/Watt

Armatür Geri Verim (LOR)% / Luminousefficacy %.....: --

FOTOMETRİK ÖLÇÜM BELİRSİZLİK TABLOSU / PHOTOMETRIC MEASUREMENT UNCERTAINTY BUDGET

Deney/Test(Unit)	Ölçüm Belirsizliği/Uncertainty
Radiant Flux (Watt)	1,3%
Luminous flux (Lumen / Lm)	1,08%
Correlated Color Temperature [CCT – Kelvin(K)]	7K
Chromaticity x coord	0,02
Chromaticity y coord	0,02
Chromaticity u' coord	0,02
Chromaticity v' coord	0,02
Color Rendering Index	1,4

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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Fotometrik Ölçümler / Photometric measurements

Parameter	Scan 7
Date/Time	24.06.2015 16:54
Radiant Flux (Watts)	9,468
Luminous Flux (lumens)	3033
Scotopic Luminous Flux (lm')	4867
Chromaticity x coord	0,39
Chromaticity y coord	0,3825
Chromaticity u coord	0,2291
Chromaticity v coord	0,337
Delta uv	0,0003
Chromaticity u' coord	0,2291
Chromaticity v' coord	0,5055

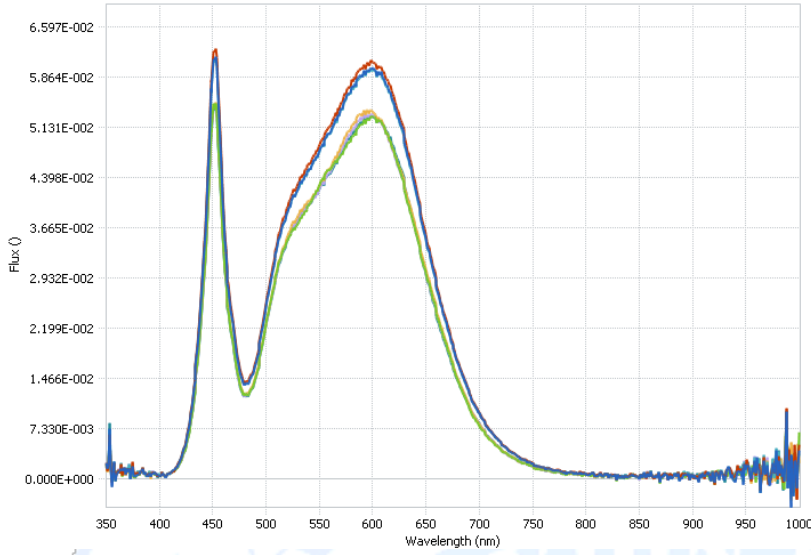
Peak Wavelength (nm)	452,1
Center Wavelength (nm)	451,7
Centroid Wavelength (nm)	572,7
Dominant Wavelength (nm)	579,8
Full Width Half Max Bandwidth (nm)	21,6
Excitation Purity (%)	31,9
Correlated Color Temperature (deg. K)	3790
SDCM	56.8 F 6500
Correlation	0,0054
Correlation Coefficient	0,000140025
Color Rendering Index Average (RA)	83,52019014
Color Rendering Index (R1)	82,4
Color Rendering Index (R2)	88,6
Color Rendering Index (R3)	93,1
Color Rendering Index (R4)	83,3
Color Rendering Index (R5)	82
Color Rendering Index (R6)	84,2
Color Rendering Index (R7)	87,1
Color Rendering Index (R8)	67,4
Color Rendering Index (R9)	16,2
Color Rendering Index (R10)	72,5
Color Rendering Index (R11)	82,3
Color Rendering Index (R12)	61,5
Color Rendering Index (R13)	83,8
Color Rendering Index (R14)	96

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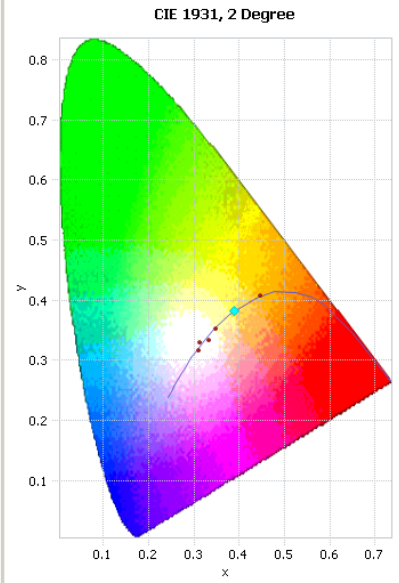
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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

▼ SPECTRAL FLUX GRAPH:



▼ CHROMATICITY DIAGRAM:

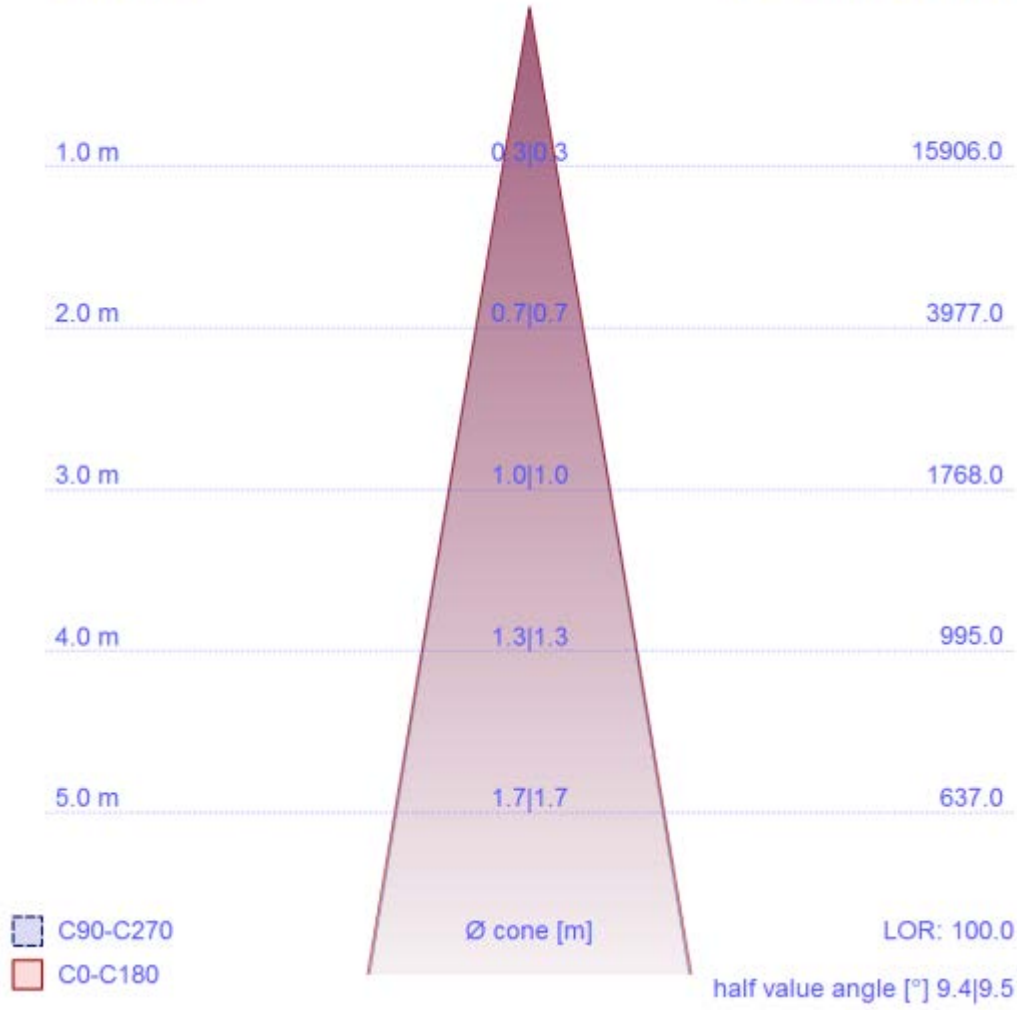


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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

Cone Diagram ;

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MUAYENE – DENEY SONUÇLARI / TEST RESULTS

