

Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 1 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

Müşterinin Adı Adresi
Customer name/address

: Baytaş Aydınlatma İmalat Proje Taah.San. ve Tic.Ltd.Şti.
Sincan Sanayi Sitesi Ahi Evran Mah. 225.Cad. No:84 Sincan -ANKARA

İstek Numarası
Order No

: 19-TST-0045

Numunenin Adı ve Tarifi
Name and identity of test item

: SIRUS M 200W PROJEKTÖR
SIRUS M 200W FLOODLIGHT

Numunenin kabul tarihi
The date of receipt of test item

: 07.03.2019

Açıklamalar
Remarks

: DGC'ye , IES LM-82-12 standardı uyarınca fotometrik ölçümler yapılmıştır.
Photometric measurement has been applied to EUT according to IESNA LM-82-12.

Deneyin Yapıldığı Tarih
Date of Test

: 08.04.2019

Raporun Sayfa Sayısı
Number of Pages of the Report

:17

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.

International Accreditation Service, Inc. (IAS) deney raporlarının tanınırlığı konusunda Avrupa Akreditasyon Birliği(EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanıma anlaşması imzalamıştır.
International Accreditation Service, Inc. (IAS) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports.

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.



Deney Sorumlusu
Person in charge of test

Gürhan CANSIZ

Onaylayan
Approval

Gürhan CANSIZ

Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 2 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

İÇİNDEKİLER
(CONTENTS)

	Sayfa Page
1. Dokümantasyon (Documentation)	
1.1 DGC, Çevre Şartları ve Sembollerin Tanımları (Description of the EUT, Environmental Conditions and Symbol Definitions)	3
1.2 Deney Standartları (Test Standards)	4
1.3 Deney Ekipmanları (Test Equipments)	4
1.4 Ölçüm Sonuçları (Test Results)	5
2. Deney Sonuçları ve Koşulları (Test Results and Conditions)	9
3. Ekler (Attachments)	16
3.1 DGC'nin Fotoğrafları (Photos of EUT)	16



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 3 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

1.1

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

Markası / Brand	: BAYLED
Modeli / Model	: SIRUS M 200W
Seri Numarası / Serial Number	: Test Numunesi Test sample
Beyan Gücü / Rated Power	: 200 W
Beyan Gerilimi / Rated Voltage	: 100-240 VAC
Sembollerin Tanımı / Definitions of Symbols	DGC= Deneden Geçen Cihaz EUT=Equipment Under Test

Çevre Şartları / Environmental Conditions	
Sıcaklık (°C) (Temperature)	25 °C ±1
Nem (Rh) (Humidity)	%45 ±10
Stabilizasyon (Stabilization)	1 hour ±5min



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 4 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

1.2 Deney Standartları (Test Standards)

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

Standart / Standard

- IES LM-82-12
- IES LM-79-08

1.3 Deney Ekipmanları (Test Equipments)

Kayıt No. (ID – No.)	Tip (Type)	Kontrol (Check Point)
LAB-011	Goniophotometer	<input checked="" type="checkbox"/>
LAB-015	AC Power Supply	<input checked="" type="checkbox"/>
LAB-027	Powermeter	<input checked="" type="checkbox"/>
LAB-012	Integrating Sphere	<input checked="" type="checkbox"/>
LAB-007	Accelerated Aging Lifetime Test System	<input checked="" type="checkbox"/>
LAB-023	Standart Lamp	<input checked="" type="checkbox"/>

1.3 Komponent listesi (Component list)

Komponent (Component)	Üretici (Manufacturer)	Model (Model)	Standart no. (Standart No.)	Sertifika no. (Certificate No.)
LED	NICHIA	NF2W757GRT-V1	-	-
DRİVER	MEANWELL	HLG-240H-36A	-	-
PCB	LIMBUS	TLS-12NI-HBL-40	-	-



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 5 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

1.4 25°C Oda Sıcaklığında ilk ölçüm (Room Temperature Initial Measurement Test at 25°C)

Unit	Room Temperature Initial Measurement Test at 25°C
Aktif Güç <i>Electric Power P_0 (W)</i>	195,8
Gerilim <i>Voltage (V)</i>	240,1
Akım <i>Current (A)</i>	0,8456
Işık Akısı <i>Luminous Flux Φ_0 (lm)</i>	22658,7
Verimlilik <i>Luminous efficacy (lm/w)</i>	115,72
CIE Koordinatları <i>CIE Coordinate x_0</i>	0,3099
CIE Koordinatları <i>CIE Coordinate y_0</i>	0,3261
CCTi (K)	6688
Tb	62,5
Tsp	98,8
Tc LED Driver	56,4



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 6 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

1.4 $T_{b,0}+25^{\circ}\text{C}$ Oda Sıcaklığında ilk ölçüm (Room Temperature Initial Measurement Test at $T_{b,0}+25^{\circ}\text{C}$)

Unit	Room Temperature Initial Measurement Test at 25°C
Aktif Güç <i>Electric Power P_o (W)</i>	191,3
Gerilim <i>Voltage (V)</i>	239,96
Akım <i>Current (A)</i>	0,8359
Işık Akısı <i>Luminous Flux Φ_o (lm)</i>	22471,8
Verimlilik <i>Luminous efficacy (lm/w)</i>	117,46
CIE Koordinatları <i>CIE Coordinate x_0</i>	0,3017
CIE Koordinatları <i>CIE Coordinate y_0</i>	0,3187
CCTi (K)	6653
Tb	87,5
Tsp	121,3
Tc LED Driver	86,8



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 7 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

2 Deney Sonuçları (Test Results)

Electrical Measurements

Aktif güç (W)(active power)	195,8 W
Ortalama Gerilim (V)(Average Voltage)	240,1 V
Ortalama AC Akım (mA)(Average AC Current)	0,8456 A
Güç Faktörü (PF)(Power Factor)	0,9645
Frekans (Hz)(Frequency)	50 Hz
Ortam Sıcaklığı (°C)(Ambient Temperature)	24,8 °C 49% Rh

Photometric Results

Işık Akısı (Luminous Flux)	22658,7 lm
Maksimum Işık Şiddeti (Peak Intensity)	31270 cd
Verimlilik (Luminous efficacy)	115,72 lm/W



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 8 / 17

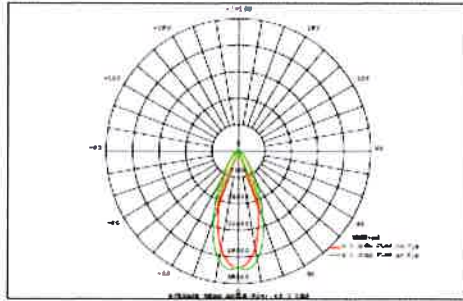
ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

2 Deney Sonuçları (Test Results)



DATA OF LAMP		Eff:115.72lm/W	
MODEL	SIRUS M	Imax (cd)	31270
NOMINAL POWER (W)	196	AVAILABILITY (%)	84.4
RATED VOLTAGE (V)	240	Avai. FLUX (lm)	19125
NOMINAL FLUX (lm)	22658.7	LOR(%)	100.0
LAMPS INSIDE	1	TOTAL FLUX (lm)	22659
TEST VOLTAGE (V)	240.1	θ @50% (H, V)	40.46DEG

AREA FLUX DIAGRAM																	UNIT: lm		φ t	φ a	
72	0.48	1.16	2.20	3.56	5.13	6.83	8.42	9.66	10.4	10.4	9.66	8.42	6.83	5.13	3.56	2.20	1.16	0.48	95.6	0.00	
64	0.89	2.16	4.06	6.52	9.51	12.7	15.6	17.7	18.8	18.8	17.7	15.6	12.7	9.51	6.52	4.06	2.16	0.89	176	0.00	
56	1.39	3.33	6.23	10.2	15.0	20.1	25.0	28.6	30.6	30.6	28.6	25.0	20.1	15.0	10.2	6.23	3.33	1.39	281	0.00	
48	1.91	4.55	8.64	14.2	21.4	30.5	40.5	49.2	55.0	55.0	49.2	40.5	30.5	21.4	14.2	8.64	4.55	1.91	452	64.3	
40	2.41	5.74	11.0	18.4	29.8	47.1	70.1	94.2	111	111	94.2	70.1	47.1	29.8	18.4	11.0	5.74	2.41	779	555	
32	2.86	6.81	13.1	23.0	41.5	73.7	122	174	210	210	174	122	73.7	41.5	23.0	13.1	6.81	2.86	1332	1170	
24	3.21	7.68	14.9	27.7	54.8	107	186	282	358	358	282	186	107	54.8	27.7	14.9	7.68	3.21	2081	1943	
16	3.46	8.25	16.2	32.0	66.7	137	252	399	513	513	399	252	137	66.7	32.0	16.2	8.25	3.46	2854	2728	
8	3.56	8.50	16.9	34.2	73.6	153	284	456	582	582	456	284	153	73.6	34.2	16.9	8.50	3.56	3223	3103	
0	3.56	8.50	16.9	34.2	73.6	153	284	456	582	582	456	284	153	73.6	34.2	16.9	8.50	3.56	3223	3103	
-8	3.46	8.25	16.2	32.0	66.7	137	252	399	513	513	399	252	137	66.7	32.0	16.2	8.25	3.46	2854	2728	
-16	3.21	7.68	14.9	27.7	54.8	107	186	282	358	358	282	186	107	54.8	27.7	14.9	7.68	3.21	2081	1943	
-24	2.86	6.81	13.1	23.0	41.5	73.7	122	174	210	210	174	122	73.7	41.5	23.0	13.1	6.81	2.86	1332	1170	
-32	2.41	5.74	11.0	18.4	29.8	47.1	70.1	94.2	111	111	94.2	70.1	47.1	29.8	18.4	11.0	5.74	2.41	779	555	
-40	1.91	4.55	8.64	14.2	21.4	30.5	40.5	49.2	55.0	55.0	49.2	40.5	30.5	21.4	14.2	8.64	4.55	1.91	452	64.3	
-48	1.39	3.33	6.23	10.2	15.0	20.1	25.0	28.6	30.6	30.6	28.6	25.0	20.1	15.0	10.2	6.23	3.33	1.39	281	0.00	
-56	0.89	2.16	4.06	6.52	9.51	12.7	15.6	17.7	18.8	18.8	17.7	15.6	12.7	9.51	6.52	4.06	2.16	0.89	176	0.00	
-64	0.48	1.16	2.20	3.56	5.13	6.83	8.42	9.66	10.4	10.4	9.66	8.42	6.83	5.13	3.56	2.20	1.16	0.48	95.6	0.00	
-72																					
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)	16	24	32	40	48	56	64	72				
φ t	40.3	96.4	187	340	635	1176	2006	3020	3774	3774	3020	2006	1176	635	340	187	96.4	40.3	22545	---	
φ a	0.00	0.00	0.00	5.82	371	961	1807	2829	3589	3589	2829	1807	961	371	5.82	0.00	0.00	0.00	---	19125	

one-half-peak spread: U:19.4,D:19.4 , L:19.5,R:19.5

NEMA Beam Type: Type 5



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 9 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

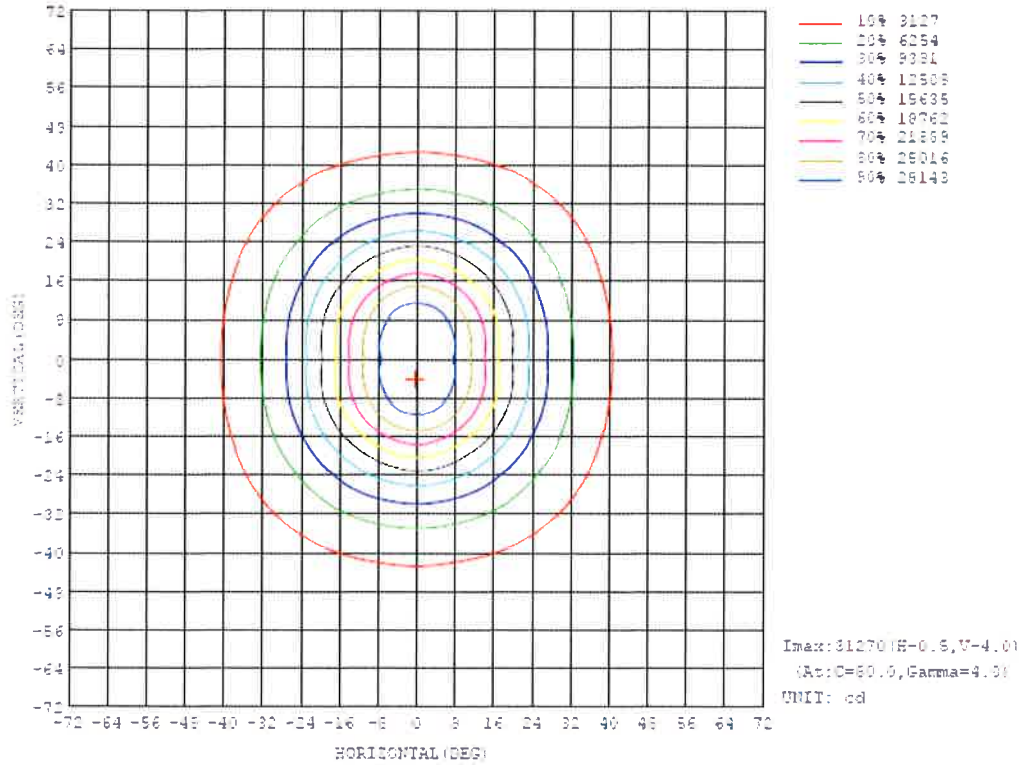
19-TST-0045-65

04-19

2

Deney Sonuçları (Test Results)

ISOCANDELA DIAGRAM



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 10 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

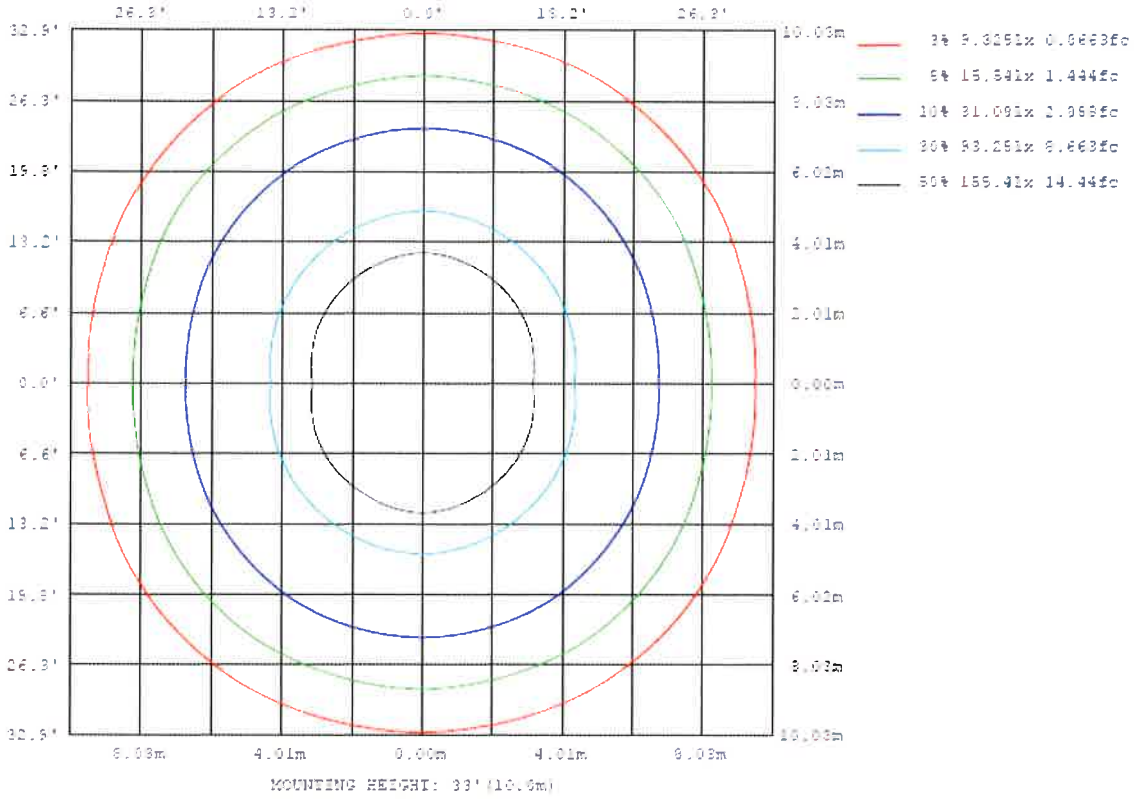
TL-806

19-TST-0045-65

04-19

2 Deney Sonuçları (Test Results)

ISOLUX DIAGRAM



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

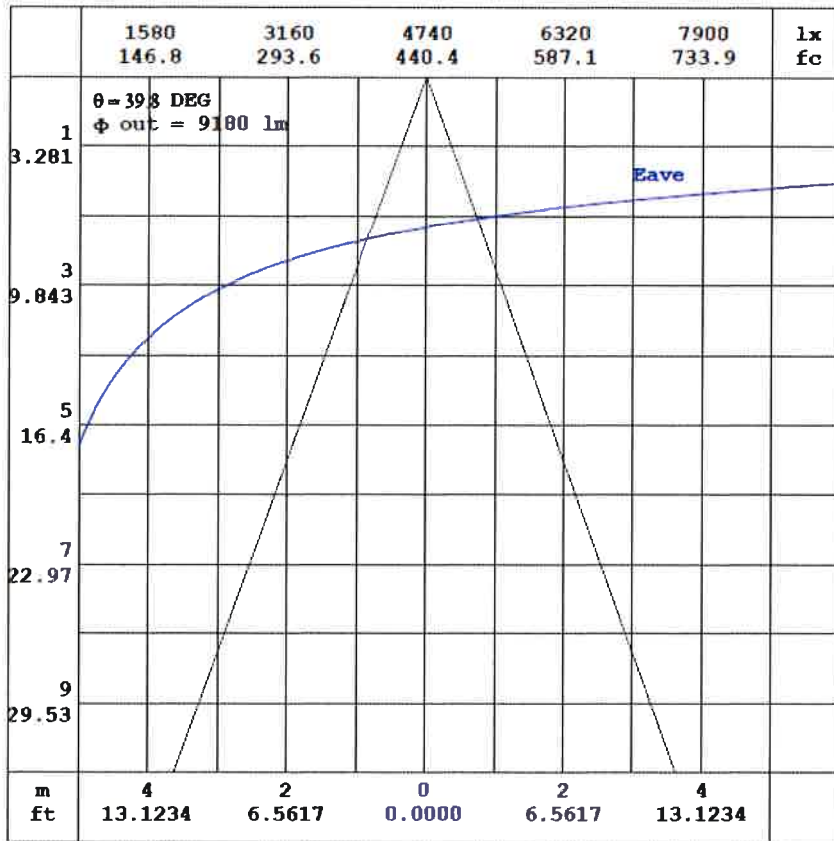
Sayfa / Page : 11 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

2 Deney Sonuçları (Test Results)**AAI CURVES**

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



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 12 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

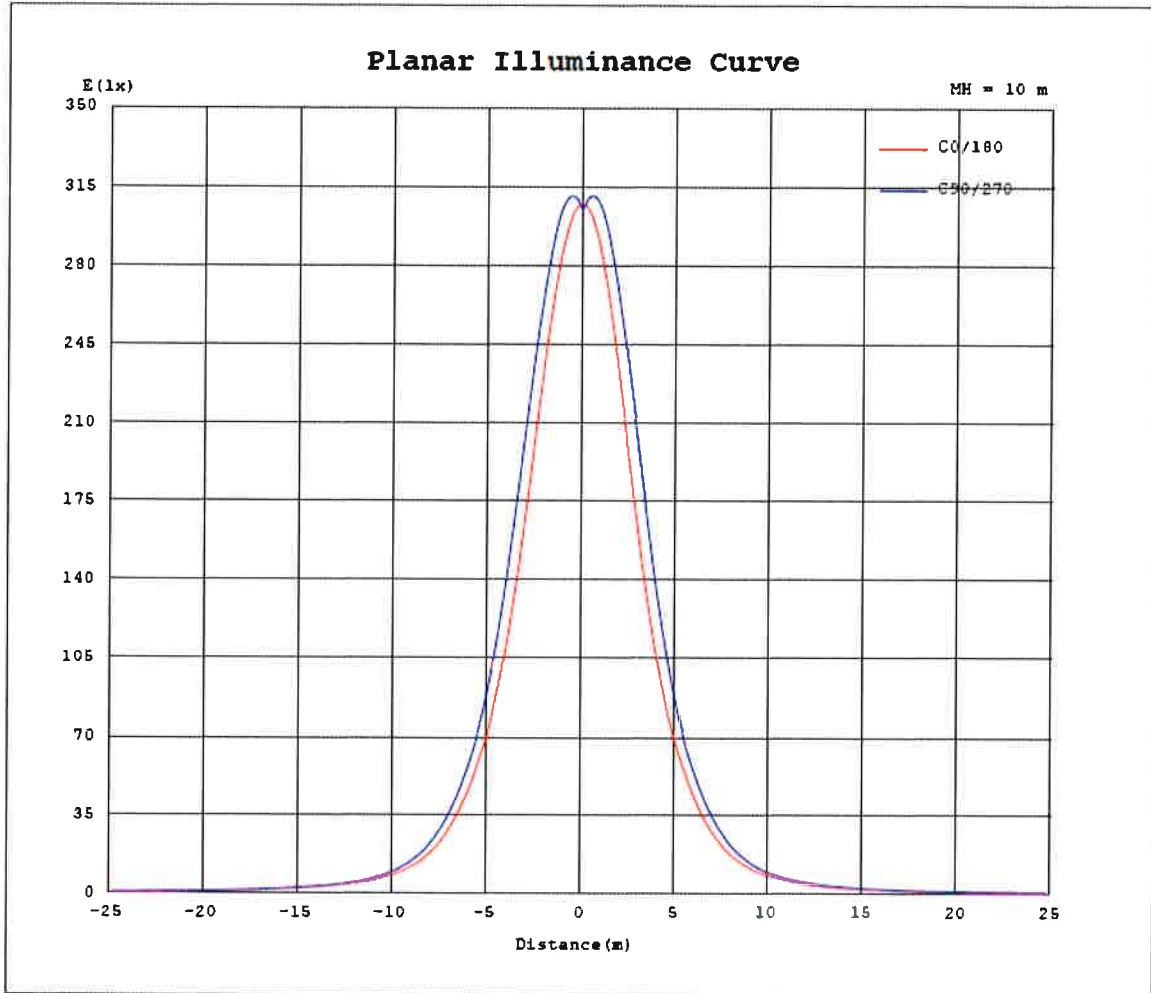
TL-806

19-TST-0045-65

04-19

2 **Deney Sonuçları (Test Results)**

Planar Illuminance Curve



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 13 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

2 Deney Sonuçları (Test Results)

Aktif güç (W)(active power)	195,8
Ortalama Gerilim (V)(Average Voltage)	240,1
Ortalama AC Akım (mA)(Average AC Current)	0,8456
Güç Faktörü (PF)(Power Factor)	0,9645
Frekans (Hz)(Frequency)	50
Ortam Sıcaklığı (°C)(Ambient Temperature)	25.1 °C 49% Rh

Spectrocolorimetric Results

Chrom x	0,3099
Chrom y	0,3261
Duv	0,0031
Chrom u'	0,1969
Chrom v'	0,4663
Peak	449 nm
Dominant	488 nm
CCT	6688 K
Nominal CCT	6000 K
Ra(CRI)	78
R9	-17
S/P Ratio	2,2
Preburning time	1 hr
Test Configuration	4π



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 14 / 17

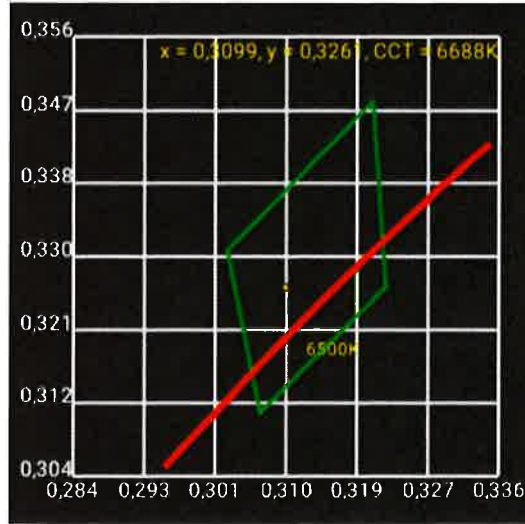
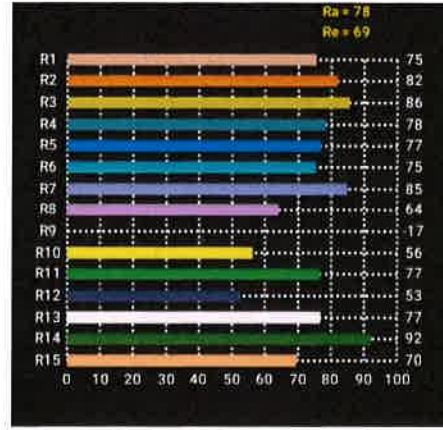
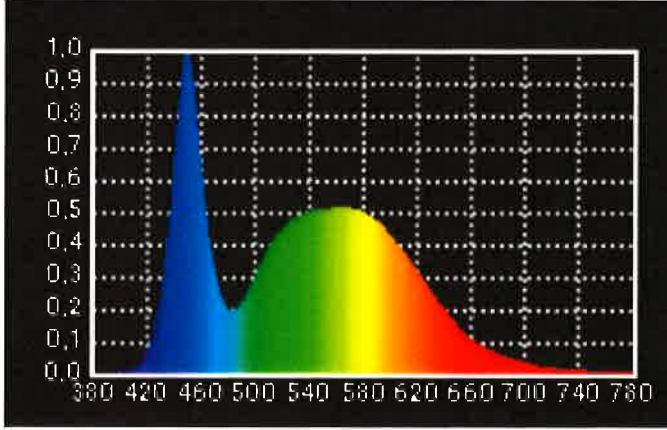
ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

2 **Deney Sonuçları (Test Results)**



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 15 / 17

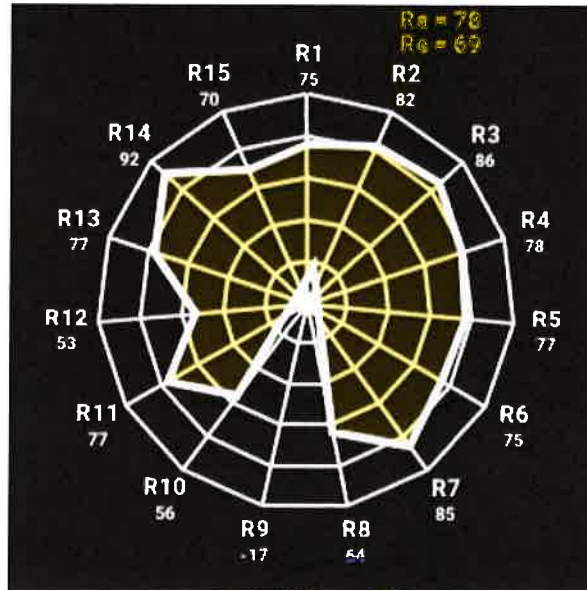
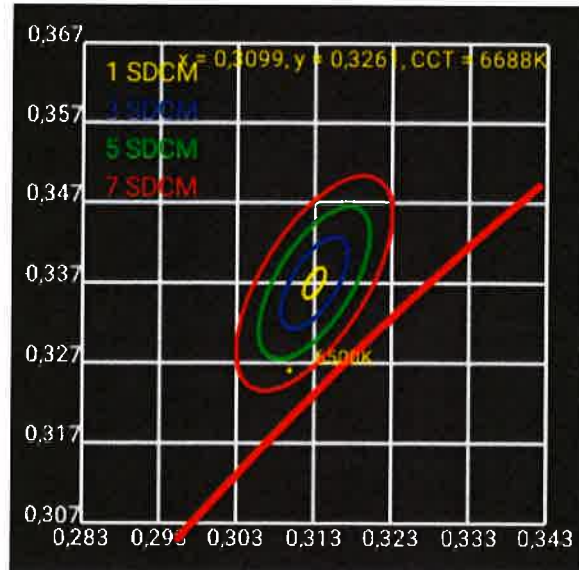
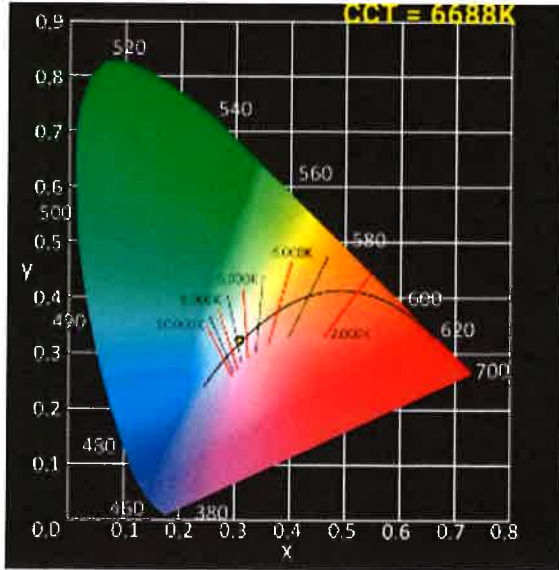
ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

2 Deney Sonuçları (Test Results)



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 16 / 17

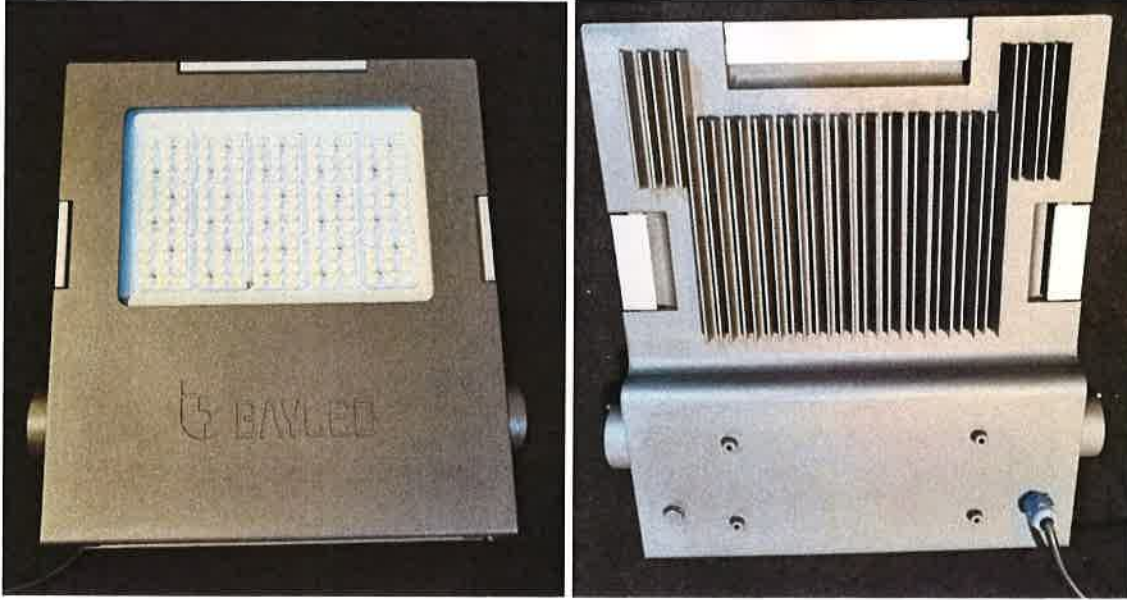
ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

3.1 DGC'nin Fotoğrafları (Photos of EUT)



Doc No: FRM-LAB-009a

Rev.No/Date: 02 / 11.01.2019

Sayfa / Page : 17 / 17

ÖLÇÜM RAPORU
MEASUREMENT REPORT

TL-806

19-TST-0045-65

04-19

3.1 DGC'nin Fotoğrafları (Photos of EUT)

