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**ÖLÇÜM RAPORU**  
MEASUREMENT REPORT

TL-806
19-TST-0039- 42/R1
03-19

**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-0039

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

: SWORD RGB FLAT DIFFUSED(90cm)  
Sword RGB Flat diffused(90cm)

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

: 26.02.2019

**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

: 27.02.2019-07.03.2019

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

:57

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.



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)

**Markası / Brand**

: HERA

**Modeli / Model**

: RGB Flat Diffused (90cm)

**Seri Numarası / Serial Number**

: Test Numunesi  
Test Sample

**Beyan Gücü / Rated Power**

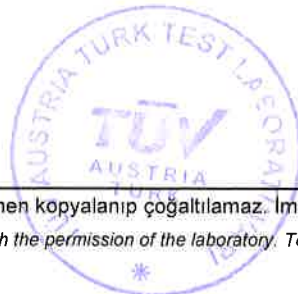
: 21,6 W

**Beyan Gerilimi / Rated Voltage**

: 48 VDC

**Sembollerin Tanımı / Definitions of Symbols**

DGC= Deneyden Geçen Cihaz  
EUT=Equipment Under Test



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**1.2 Deney Standartları (Test Standards)**

Deneyle 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	05.06.2019	<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	28.05.2019	<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	Cree Inc	CLQ6A	Led-RGBW IF=20Ma VR=5V $\phi V = \text{Initial Data} \times 0,7$	-
PCB	C13090_R1.0	1.6mm FR44 Layers, 35+35+35+35um Cu	-	-



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### 2.1 Kırmızı Renk Deney Sonuçları ( Test Results of the Red Color)

#### Elektriksel Ölçümler

(Electrical Measurements)

Ölçülen Güç (W) (Input Power)	7,260
Ölçülen Gerilim (V) (Input Voltage)	48 VDC
Ölçülen Akım (A) (Input Current)	0,1513
Güç Faktörü (PF) (Power Factor)	-
Ölçülen Frekans (Hz) (Input Frequency)	-
Ortam Sıcaklığı / Bağıl Nem (Ambient Temperature / Relative Humidity)	25,1 °C 48% Rh
Stabilizasyon Süresi (Stabilization Time)	30 dk ±5dk

#### Fotometrik Ölçüm Sonuçları

(Photometric Measurement Results)

Toplam Işık Akısı (Total Luminous Flux) (lm)	46,050
Maksimum Işık Şiddeti (Max. Light Intensity) (cd)	8,678
Armatür Etkinliği (Luminaire Efficacy) (lm/W)	6,34



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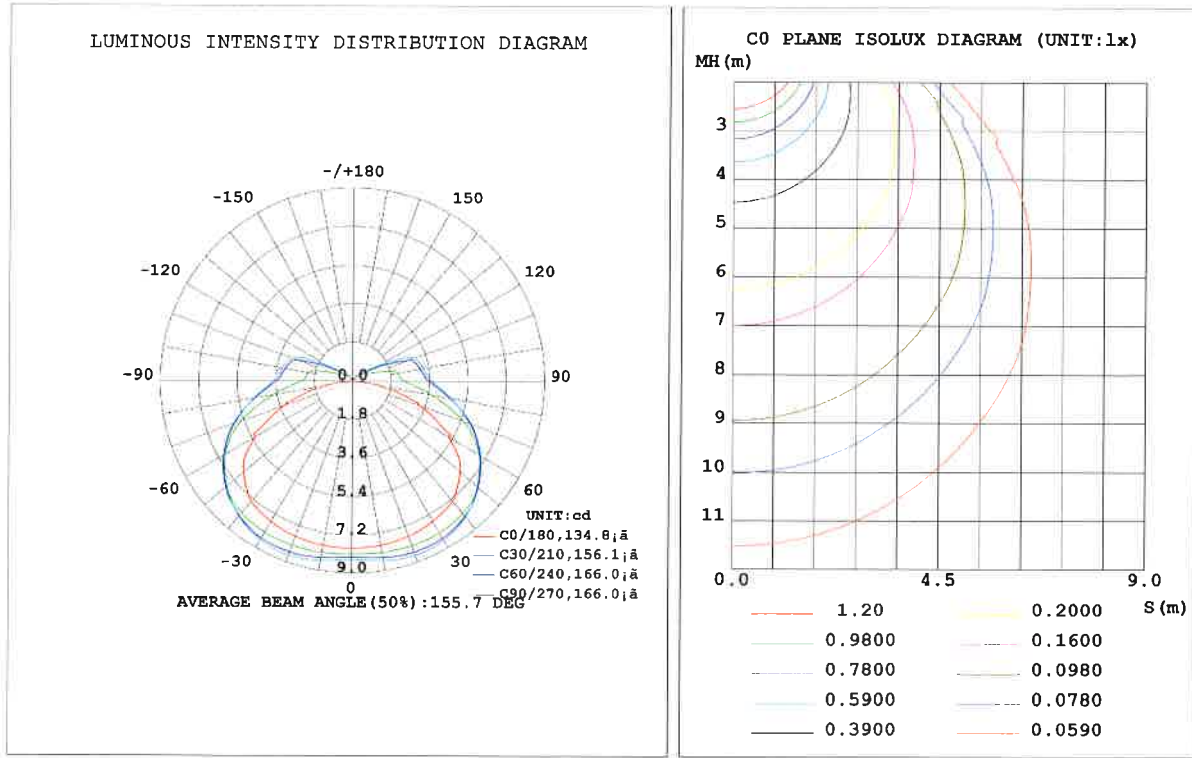
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**



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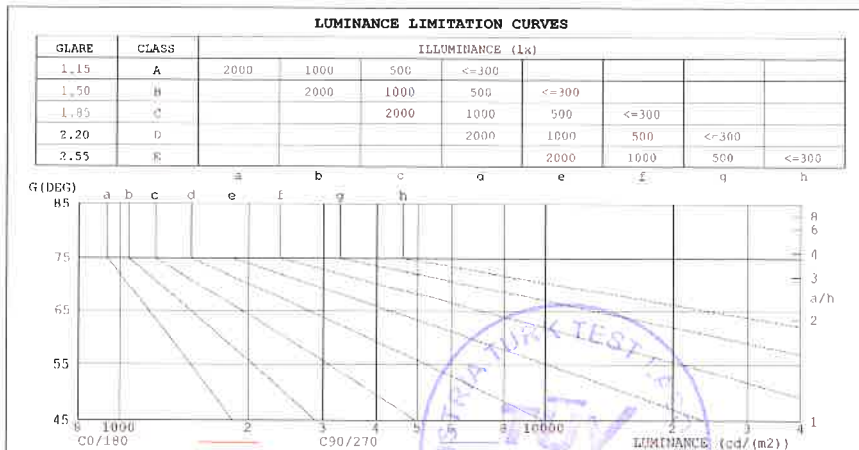
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**

**ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES**

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	İlum, lamp
5	7.830	8.217	8.414	8.217	7.830	8.217	8.414	8.217	0- 5	0.1954	0.1954	0.42, 0.42
10	7.814	8.278	8.520	8.278	7.814	8.278	8.520	8.278	5- 10	0.5877	0.7831	1.7, 1.7
15	7.782	8.342	8.616	8.342	7.782	8.342	8.616	8.342	10- 15	0.9809	1.764	3.83, 3.83
20	7.731	8.384	8.669	8.384	7.731	8.384	8.669	8.384	15- 20	1.369	3.133	6.8, 6.8
25	7.662	8.397	8.667	8.397	7.662	8.397	8.667	8.397	20- 25	1.744	4.877	10.6, 10.6
30	7.576	8.374	8.596	8.374	7.576	8.374	8.596	8.374	25- 30	2.098	6.975	15.1, 15.1
35	7.472	8.307	8.460	8.307	7.472	8.307	8.460	8.307	30- 35	2.421	9.396	20.4, 20.4
40	7.326	8.186	8.257	8.186	7.326	8.186	8.257	8.186	35- 40	2.706	12.10	26.3, 26.3
45	6.993	8.005	7.989	8.005	6.993	8.005	7.989	8.005	40- 45	2.939	15.04	32.7, 32.7
50	6.616	7.758	7.658	7.758	6.616	7.758	7.658	7.758	45- 50	3.102	18.14	39.4, 39.4
55	6.079	7.433	7.285	7.433	6.079	7.433	7.285	7.433	50- 55	3.191	21.33	46.3, 46.3
60	5.221	7.021	6.868	7.021	5.221	7.021	6.868	7.021	55- 60	3.188	24.52	53.3, 53.3
65	4.346	6.513	6.383	6.513	4.346	6.513	6.383	6.513	60- 65	3.066	27.61	60, 60
70	3.391	5.922	5.834	5.922	3.391	5.922	5.834	5.922	65- 70	2.895	30.50	66.2, 66.2
75	2.361	5.245	5.252	5.245	2.361	5.245	5.252	5.245	70- 75	2.611	33.11	71.9, 71.9
80	1.405	4.521	4.672	4.521	1.405	4.521	4.672	4.521	75- 80	2.263	35.38	76.8, 76.8
85	0.5807	3.836	4.135	3.836	0.5807	3.836	4.135	3.836	80- 85	1.898	37.28	80.9, 80.9
90	0.0096	3.316	3.710	3.316	0.0096	3.316	3.710	3.316	85- 90	1.583	38.86	84.4, 84.4
95	0.0181	3.086	3.483	3.086	0.0181	3.086	3.483	3.086	90- 95	1.393	40.25	87.4, 87.4
100	0.0138	2.960	3.356	2.960	0.0138	2.960	3.356	2.960	95-100	1.316	41.57	90.3, 90.3
105	0.0082	2.782	3.219	2.782	0.0082	2.782	3.219	2.782	100-105	1.220	42.79	92.9, 92.9
110	0.0037	2.106	3.058	2.106	0.0037	2.106	3.058	2.106	105-110	1.055	43.84	95.2, 95.2
115	0.0003	1.428	2.336	1.428	0.0003	1.428	2.336	1.428	110-115	0.8023	44.65	97.97
120	0	0.9065	1.460	0.9065	0	0.9065	1.460	0.9065	115-120	0.5241	45.17	98.1, 98.1
125	0	0.6281	0.8627	0.6281	0	0.6281	0.8627	0.6281	120-125	0.3257	45.50	98.8, 98.8
130	0	0.4631	0.5039	0.4631	0	0.4631	0.5039	0.4631	125-130	0.2012	45.70	99.2, 99.2
135	0	0.3447	0.3519	0.3447	0	0.3447	0.3519	0.3447	130-135	0.1328	45.83	99.5, 99.5
140	0	0.2662	0.2338	0.2662	0	0.2662	0.2338	0.2662	135-140	0.0870	45.92	99.7, 99.7
145	0	0.1986	0.1789	0.1986	0	0.1986	0.1789	0.1986	140-145	0.0565	45.97	99.8, 99.8
150	0	0.1408	0.1413	0.1408	0	0.1408	0.1413	0.1408	145-150	0.0372	46.01	99.9, 99.9
155	0	0.0917	0.1003	0.0917	0	0.0917	0.1003	0.0917	150-155	0.0224	46.03	100, 100
160	0	0.0491	0.0655	0.0491	0	0.0491	0.0655	0.0491	155-160	0.0115	46.04	100, 100
165	0	0.0145	0.0329	0.0145	0	0.0145	0.0329	0.0145	160-165	0.0046	46.05	100, 100
170	0	0	0.0031	0	0	0	0.0031	0	165-170	0.0009	46.05	100, 100
175	0	0	0	0	0	0	0	0	170-175	0.0000	46.05	100, 100
180	0	0	0	0	0	0	0	0	175-180	0	46.05	100, 100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	67	474
80	81	269
75	91	203
70	99	171
65	103	151
60	104	137
55	106	127
50	103	119
45	99	113

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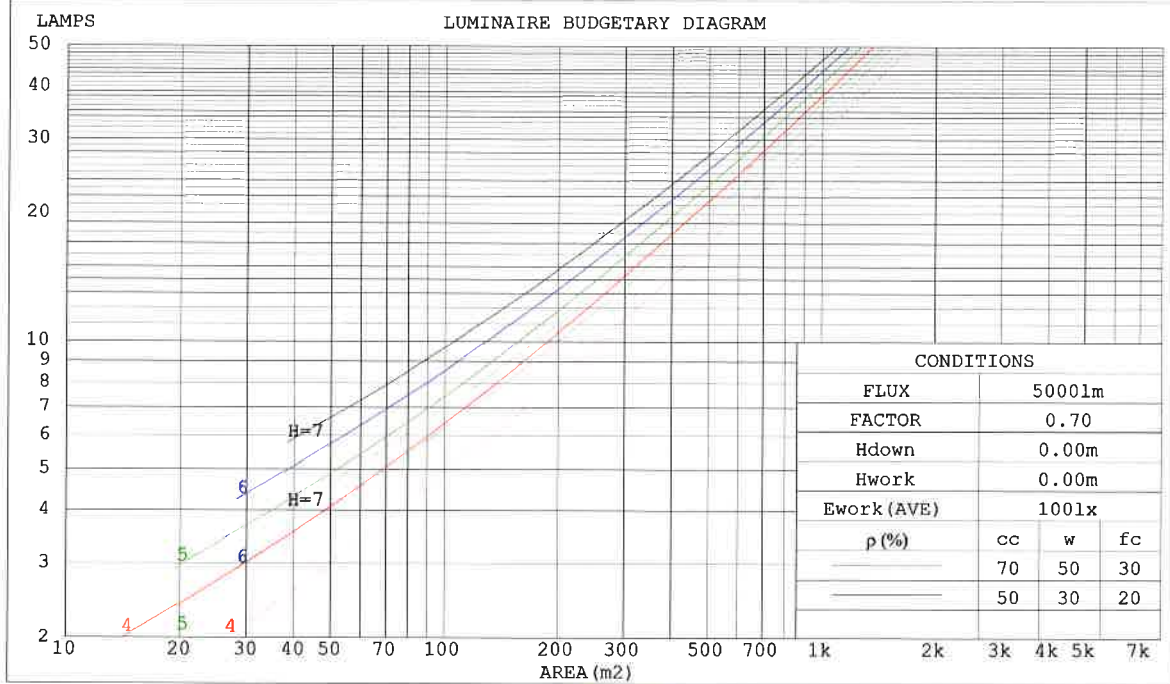
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.15	1.15	1.15	1.11	1.11	1.11	1.02	1.02	1.02	.95	.95	.95	.88	.88	.88	.84
1.0	.96	.90	.85	.92	.87	.82	.84	.80	.77	.78	.75	.72	.72	.69	.67	.63
2.0	.81	.73	.66	.78	.70	.64	.72	.66	.60	.66	.61	.57	.61	.57	.53	.50
3.0	.70	.61	.53	.67	.59	.52	.62	.55	.49	.57	.51	.46	.52	.47	.43	.40
4.0	.61	.51	.44	.59	.50	.43	.54	.46	.40	.50	.43	.38	.46	.40	.36	.33
5.0	.54	.44	.37	.52	.43	.36	.48	.40	.34	.44	.37	.32	.41	.35	.30	.28
6.0	.48	.38	.32	.46	.37	.31	.43	.35	.29	.40	.33	.28	.37	.31	.26	.24
7.0	.43	.34	.27	.42	.33	.27	.39	.31	.25	.36	.29	.24	.33	.27	.23	.21
8.0	.39	.30	.24	.38	.29	.23	.35	.28	.22	.33	.26	.21	.30	.25	.20	.18
9.0	.36	.27	.21	.34	.26	.21	.32	.25	.20	.30	.24	.19	.28	.22	.18	.16
10.0	.33	.25	.19	.32	.24	.19	.30	.23	.18	.28	.21	.17	.26	.20	.16	.14



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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**

**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	.397	.226	.072	.385	.220	.070	.363	.208	.066	.342	.197	.063	.323	.187	.060	
2.0	.345	.189	.058	.334	.184	.057	.314	.174	.054	.295	.165	.052	.278	.157	.049	
3.0	.306	.163	.049	.296	.159	.048	.278	.151	.046	.261	.143	.044	.245	.136	.042	
4.0	.275	.143	.042	.266	.139	.041	.250	.132	.040	.234	.126	.038	.220	.119	.036	
5.0	.250	.127	.037	.242	.124	.036	.227	.118	.035	.212	.112	.033	.199	.106	.032	
6.0	.228	.114	.033	.221	.112	.032	.207	.106	.031	.194	.101	.030	.182	.096	.029	
7.0	.210	.104	.029	.204	.101	.029	.191	.097	.028	.179	.092	.027	.168	.087	.026	
8.0	.195	.095	.027	.189	.093	.026	.177	.088	.025	.166	.084	.024	.156	.080	.023	
9.0	.181	.088	.024	.176	.086	.024	.165	.082	.023	.155	.078	.022	.146	.074	.021	
10.0	.169	.081	.023	.164	.079	.022	.154	.076	.021	.145	.072	.021	.137	.069	.020	

$\rho_{cc}$	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	.309	.309	.309	.264	.264	.264	.181	.181	.181	.104	.104	.104	.033	.033	.033	
1.0	.306	.275	.247	.262	.236	.213	.179	.163	.147	.103	.094	.086	.033	.030	.028	
2.0	.300	.252	.212	.257	.217	.184	.176	.150	.128	.102	.087	.075	.033	.028	.024	
3.0	.293	.236	.191	.251	.204	.165	.172	.141	.116	.100	.083	.068	.032	.027	.022	
4.0	.285	.224	.176	.245	.193	.153	.168	.135	.108	.097	.079	.064	.031	.026	.021	
5.0	.278	.214	.167	.238	.185	.145	.164	.129	.102	.095	.076	.061	.031	.025	.020	
6.0	.270	.206	.160	.232	.178	.139	.160	.125	.098	.093	.073	.059	.030	.024	.019	
7.0	.263	.199	.155	.226	.173	.135	.156	.121	.096	.091	.071	.057	.029	.023	.019	
8.0	.256	.194	.151	.220	.168	.132	.152	.118	.093	.089	.070	.056	.029	.023	.018	
9.0	.250	.189	.148	.215	.164	.129	.149	.115	.092	.087	.068	.055	.028	.022	.018	
10.0	.244	.185	.145	.210	.160	.127	.146	.113	.090	.085	.067	.054	.028	.022	.018	



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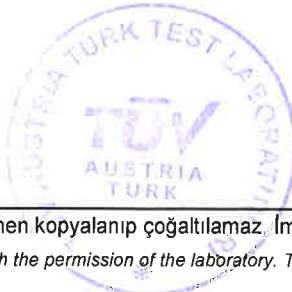
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### 2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)

#### 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	4.5	6.0	5.0	6.5	7.0	5.2	6.6	5.7	7.1	7.6
3H	6.3	7.6	6.8	8.1	8.7	7.7	9.0	8.2	9.5	10.1
4H	6.9	8.2	7.5	8.7	9.3	9.0	10.3	9.6	10.8	11.4
6H	7.4	8.6	7.9	9.1	9.7	10.5	11.7	11.0	12.2	12.8
8H	7.5	8.7	8.1	9.2	9.9	11.3	12.4	11.8	13.0	13.6
12H	7.6	8.7	8.2	9.3	9.9	12.2	13.3	12.7	13.9	14.5
4H 2H	5.6	6.9	6.1	7.4	8.0	6.0	7.3	6.6	7.8	8.4
3H	7.7	8.9	8.3	9.4	10.1	8.8	9.9	9.3	10.4	11.1
4H	8.7	9.7	9.2	10.3	10.9	10.2	11.3	10.8	11.9	12.5
6H	9.3	10.2	9.9	10.9	11.6	11.9	12.8	12.5	13.4	14.1
8H	9.5	10.4	10.2	11.0	11.7	12.7	13.6	13.4	14.2	15.0
12H	9.7	10.5	10.3	11.1	11.8	13.8	14.6	14.4	15.2	15.9
8H 4H	9.6	10.4	10.2	11.0	11.8	10.8	11.7	11.4	12.3	13.0
6H	10.7	11.4	11.3	12.1	12.8	12.7	13.4	13.4	14.1	14.8
8H	11.1	11.8	11.8	12.5	13.2	13.8	14.4	14.4	15.1	15.9
12H	11.5	12.0	12.1	12.7	13.5	15.0	15.6	15.7	16.3	17.1
12H 4H	9.8	10.6	10.4	11.2	11.9	10.9	11.7	11.5	12.3	13.0
6H	11.1	11.8	11.8	12.4	13.2	12.9	13.5	13.6	14.2	15.0
8H	11.8	12.3	12.5	13.0	13.8	14.1	14.7	14.8	15.4	16.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 46.05 lm Total Lamp Luminous Flux. (8log(F/F0) = -10.7)



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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)****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) $k(RI) \times RCR = 5$									
$k = 0.60$	46	34	26	45	33	26	44	32	25	19
0.80	56	42	34	54	41	33	52	40	33	25
1.00	63	50	41	62	49	41	58	50	40	31
1.25	71	57	49	68	56	48	64	54	47	37
1.50	76	63	54	73	62	53	69	59	52	41
2.00	83	72	63	81	70	62	75	66	60	48
2.50	88	78	69	85	75	68	79	71	65	52
3.00	92	82	75	89	80	73	82	75	69	56
4.00	97	89	82	93	86	80	86	80	75	62
5.00	100	93	87	96	90	84	89	84	79	65
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			



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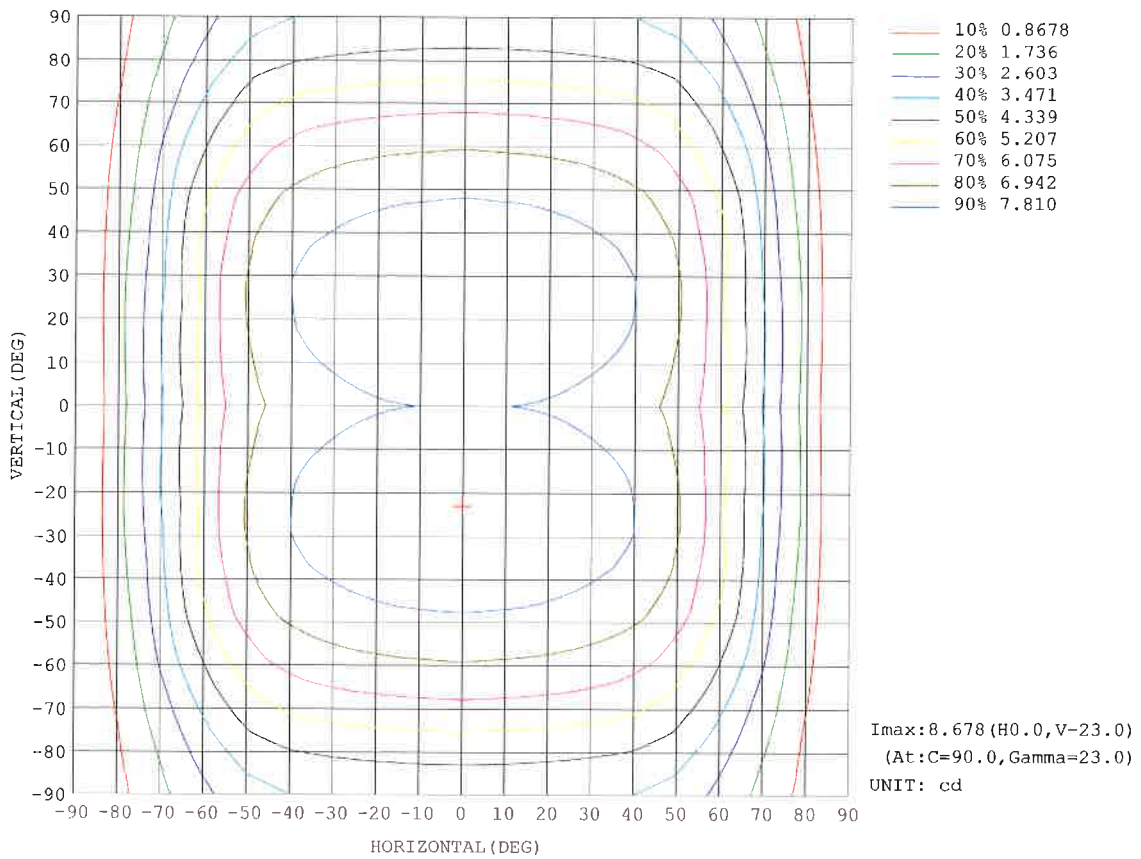
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**

**ISOCANDELA DIAGRAM**



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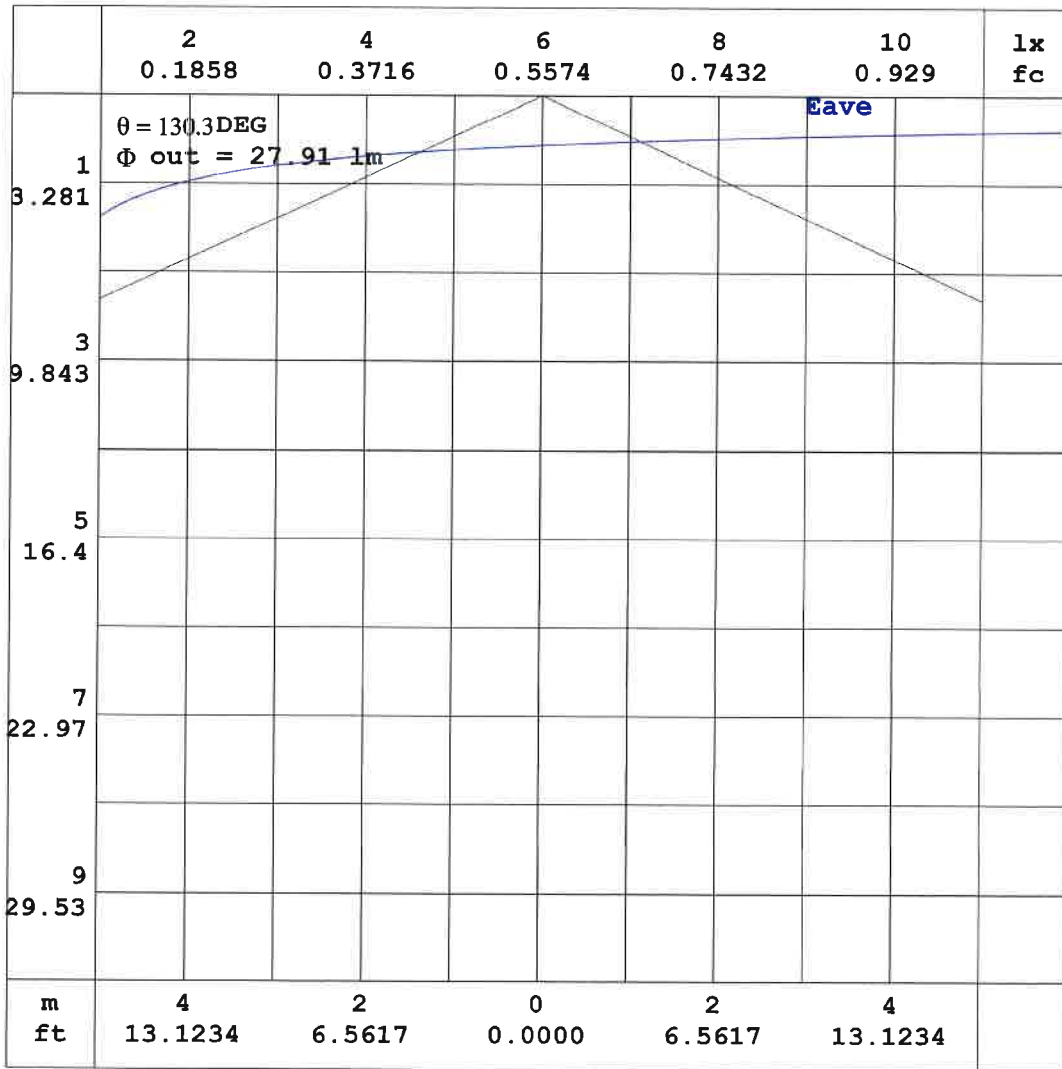
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)****AAI CURVES**

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



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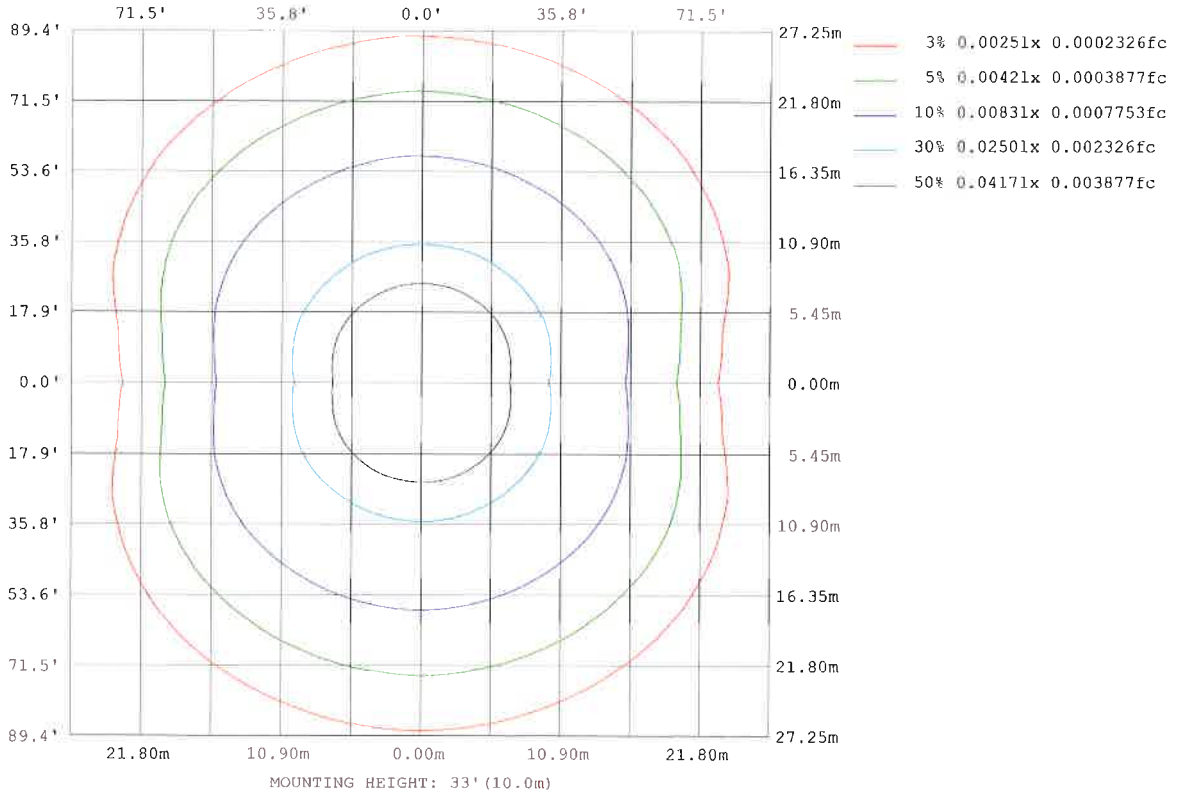
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**

**ISOLUX DIAGRAM**



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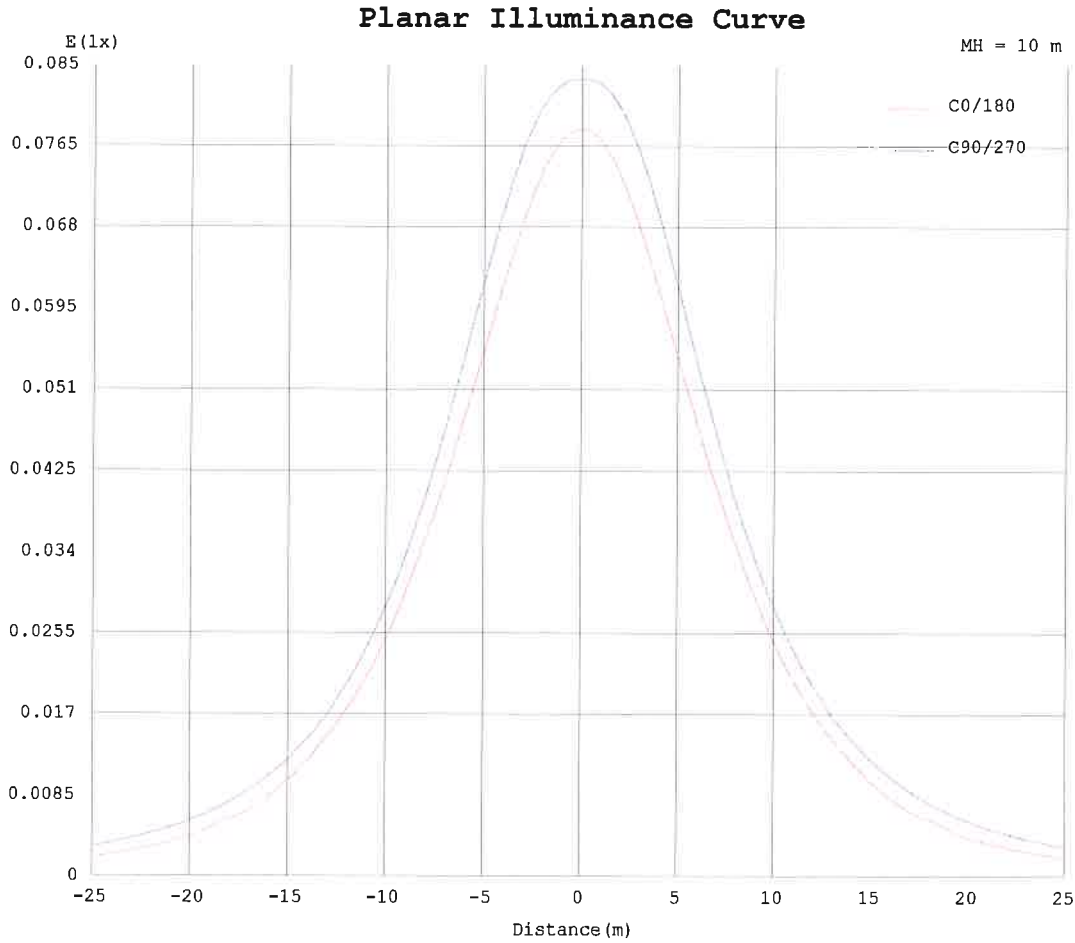
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**2.1 Kırmızı renk Fotometrik Deney Sonuçları (Photometric Test Results of the Red color)**



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**ÖLÇÜM RAPORU**  
MEASUREMENT REPORT**2.2 Kırmızı Renk Spektrokolorimetrik Deney Sonuçları** (spectrocolorimetric Test Results of the Red color)**Elektriksel Ölçümler**

(Electrical Measurements)

<b>Ölçülen Güç (W)</b> (Input Power)	7,260
<b>Ölçülen Gerilim (V)</b> (Input Voltage)	48 VDC
<b>Ölçülen Akım (A)</b> (Input Current)	0,1513
<b>Güç Faktörü (PF)</b> (Power Factor)	-
<b>Ölçülen Frekans (Hz)</b> (Input Frequency)	-
<b>Ortam Sıcaklığı / Bağıl Nem</b> (Ambient Temperature / Relative Humidity)	25 °C 48% Rh
<b>Stabilizasyon Süresi</b> (Stabilization Time)	60 dk ±5dk

**Spektrokolorimetrik Ölçüm Sonuçları**

(Spectrocolorimetric Measurement Results)

<b>Chrom x</b>	0,6852
<b>Chrom y</b>	0,3082
<b>Duv</b>	0,00
<b>Chrom u'</b>	0,5145
<b>Chrom v'</b>	0,5206
<b>Peak</b>	628 nm
<b>Dominant</b>	620 nm
<b>CCT</b>	0 K
<b>Nominal CCT</b>	-
<b>Ra(CRI)</b>	0
<b>R9</b>	0
<b>S/P Ratio</b>	0,1
<b>Preburning time</b>	1 hr
<b>Test Configuration</b>	4π



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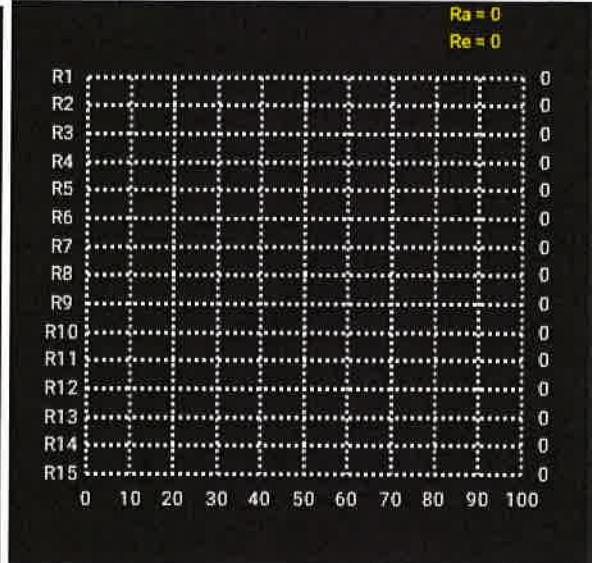
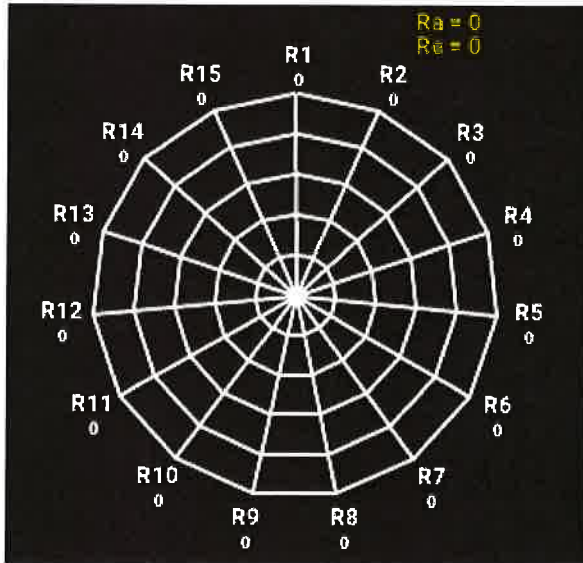
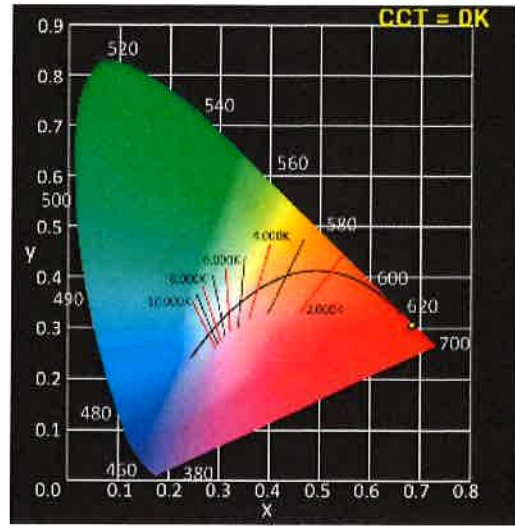
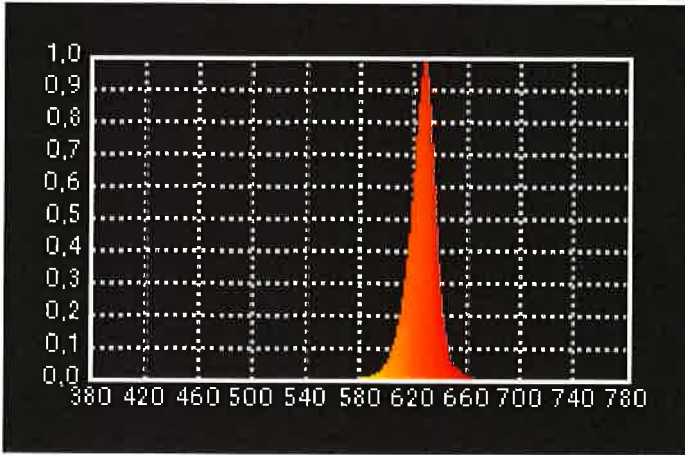
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**2.2**

**Kırmızı Renk Spektrokolorimetrik Deney Sonuçları** (spectrocolorimetric Test Results of the Red color)

**Spectral Power Distribution**



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**2.3 Mavi Renk Deney Sonuçları ( Test Results of the Blue Color)**

**Elektriksel Ölçümler**

(Electrical Measurements)

<b>Ölçülen Güç (W)</b> (Input Power)	7,262
<b>Ölçülen Gerilim (V)</b> (Input Voltage)	48 VDC
<b>Ölçülen Akım (A)</b> (Input Current)	0,1513
<b>Güç Faktörü (PF)</b> (Power Factor)	-
<b>Ölçülen Frekans (Hz)</b> (Input Frequency)	-
<b>Ortam Sıcaklığı / Bağıl Nem</b> (Ambient Temperature / Relative Humidity)	25,1 °C 48% Rh
<b>Stabilizasyon Süresi</b> (Stabilization Time)	60 dk ±5dk

**Fotometrik Ölçüm Sonuçları**

(Photometric Measurement Results)

<b>Toplam Işık Akısı</b> (Total Luminous Flux) (lm)	40,372
<b>Maksimum Işık Şiddeti</b> (Max. Light Intensity) (cd)	7,176
<b>Armatür Etkinliği</b> (Luminaire Efficacy) (lm/W)	5,56



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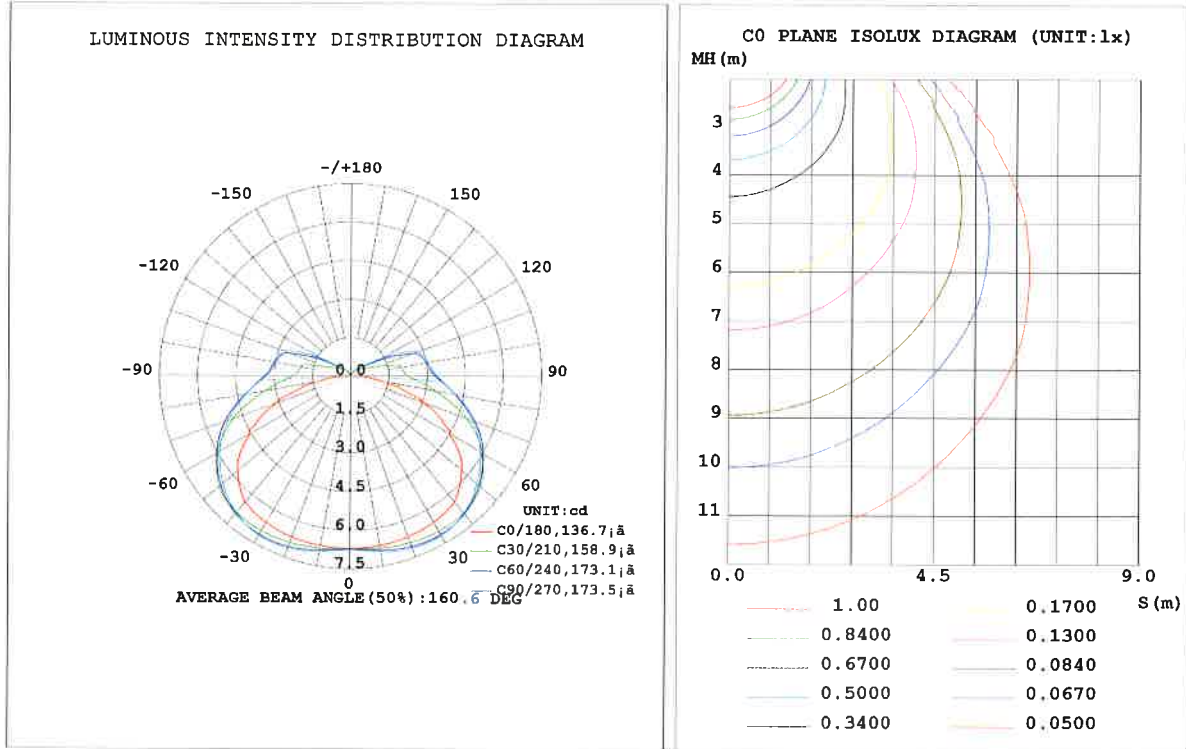
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**2.3**

**Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**



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**2.3 Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**

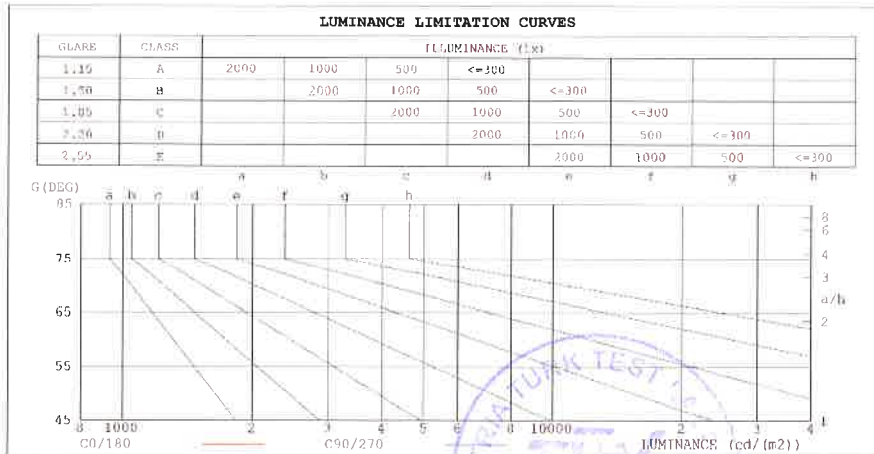
**ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES**

ZONAL FLUX DIAGRAM:

y	C0	C45	C90	C135	C180	C225	C270	C315	y	Φ zone	Φ total	llum, lamp
5	6.715	6.785	6.830	6.785	6.715	6.785	6.830	6.785	0- 5	0.1616	0.1616	0.40,0.40
10	6.707	6.857	6.945	6.857	6.707	6.857	6.945	6.857	5- 10	0.4873	0.6489	1.61,1.61
15	6.692	6.937	7.057	6.937	6.692	6.937	7.057	6.937	10- 15	0.8159	1.465	3.63,3.63
20	6.664	7.004	7.141	7.004	6.664	7.004	7.141	7.004	15- 20	1.143	2.608	6.46,6.46
25	6.625	7.052	7.173	7.052	6.625	7.052	7.173	7.052	20- 25	1.463	4.071	10.1,10.1
30	6.573	7.072	7.153	7.072	6.573	7.072	7.153	7.072	25- 30	1.769	5.840	14.5,14.5
35	6.503	7.054	7.075	7.054	6.503	7.054	7.075	7.054	30- 35	2.052	7.892	19.5,19.5
40	6.388	6.991	6.940	6.991	6.388	6.991	6.940	6.991	35- 40	2.305	10.20	25.3,25.3
45	6.093	6.880	6.749	6.880	6.093	6.880	6.749	6.880	40- 45	2.515	12.71	31.5,31.5
50	5.737	6.707	6.505	6.707	5.737	6.707	6.505	6.707	45- 50	2.666	15.38	38.1,38.1
55	5.240	6.468	6.223	6.468	5.240	6.468	6.223	6.468	50- 55	2.752	18.13	44.9,44.9
60	4.502	6.147	5.904	6.147	4.502	6.147	5.904	6.147	55- 60	2.760	20.89	51.7,51.7
65	3.904	5.741	5.527	5.741	3.904	5.741	5.527	5.741	60- 65	2.686	23.58	58.4,58.4
70	3.058	5.262	5.094	5.262	3.058	5.262	5.094	5.262	65- 70	2.530	26.10	64.7,64.7
75	2.128	4.704	4.629	4.704	2.128	4.704	4.629	4.704	70- 75	2.301	28.41	70.4,70.4
80	1.244	4.103	4.162	4.103	1.244	4.103	4.162	4.103	75- 80	2.017	30.42	75.4,75.4
85	0.5537	3.532	3.724	3.532	0.5537	3.532	3.724	3.532	80- 85	1.721	32.14	79.6,79.6
90	0.0126	3.098	3.379	3.098	0.0126	3.098	3.379	3.098	85- 90	1.457	33.60	83.2,83.2
95	0.0053	2.899	3.190	2.899	0.0053	2.899	3.190	2.899	90- 95	1.295	34.90	86.4,86.4
100	0.0059	2.791	3.087	2.791	0.0059	2.791	3.087	2.791	95-100	1.229	36.12	89.5,89.5
105	0.0025	2.629	2.971	2.629	0.0025	2.629	2.971	2.629	100-105	1.142	37.27	92.3,92.3
110	0	1.995	2.833	1.995	0	1.995	2.833	1.995	105-110	0.9882	38.26	94.8,94.8
115	0	1.369	2.177	1.369	0	1.369	2.177	1.369	110-115	0.7546	39.01	96.6,96.6
120	0	0.8871	1.370	0.8871	0	0.8871	1.370	0.8871	115-120	0.4981	39.51	97.9,97.9
125	0	0.6252	0.8253	0.6252	0	0.6252	0.8253	0.6252	120-125	0.3148	39.82	98.9,98.9
130	0	0.4636	0.4831	0.4636	0	0.4636	0.4831	0.4636	125-130	0.1982	40.02	99.1,99.1
135	0	0.3451	0.3359	0.3451	0	0.3451	0.3359	0.3451	130-135	0.1316	40.15	99.5,99.5
140	0	0.2660	0.2234	0.2660	0	0.2660	0.2234	0.2660	135-140	0.0869	40.24	99.7,99.7
145	0	0.1986	0.1732	0.1986	0	0.1986	0.1732	0.1986	140-145	0.0561	40.30	99.8,99.8
150	0	0.1405	0.1353	0.1405	0	0.1405	0.1353	0.1405	145-150	0.0369	40.33	99.9,99.9
155	0	0.0909	0.0973	0.0909	0	0.0909	0.0973	0.0909	150-155	0.0223	40.35	100,100
160	0	0.0499	0.0632	0.0499	0	0.0499	0.0632	0.0499	155-160	0.0116	40.37	100,100
165	0	0.0160	0.0328	0.0160	0	0.0160	0.0328	0.0160	160-165	0.0047	40.37	100,100
170	0	0	0.0053	0	0	0	0.0053	0	165-170	0.0010	40.37	100,100
175	0	0	0	0	0	0	0	0	170-175	0.0001	40.37	100,100
180	0	0	0	0	0	0	0	0	175-180	0	40.37	100,100

LUMINOUS INTENSITY:cd

UNIT:lm



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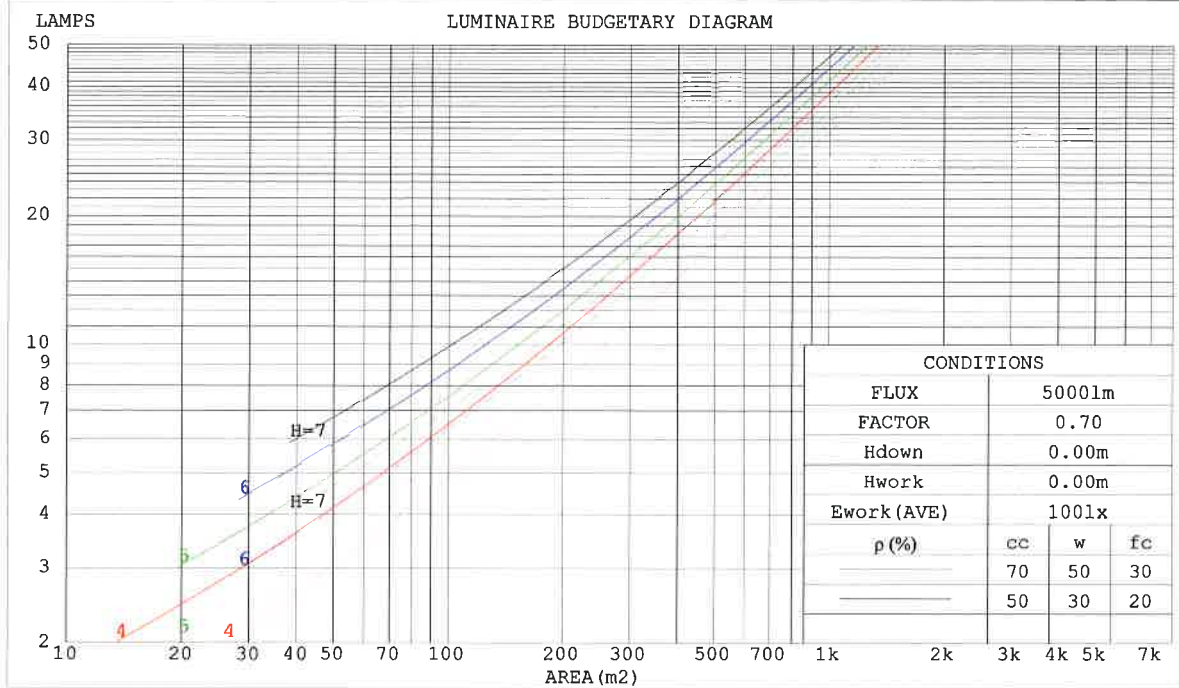
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**ÖLÇÜM RAPORU**  
**MEASUREMENT REPORT**

**2.3 Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

ρcc	80%			70%			50%			30%			10%			0
	ρw	ρfc	RCR	ρw	ρfc	RCR	ρw	ρfc	RCR	ρw	ρfc	RCR	ρw	ρfc	RCR	
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
		20%			20%			20%			20%			20%		0
	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.15	1.15	1.15	1.10	1.10	1.10	1.02	1.02	1.02	.94	.94	.94	.87	.87	.87	.83
1.0	.95	.89	.84	.91	.86	.81	.84	.80	.76	.77	.73	.70	.70	.68	.65	.62
2.0	.81	.72	.66	.77	.70	.63	.71	.65	.59	.65	.60	.55	.59	.55	.52	.48
3.0	.69	.60	.53	.66	.58	.51	.61	.54	.48	.56	.50	.45	.51	.46	.42	.39
4.0	.61	.51	.43	.58	.49	.42	.53	.46	.40	.49	.42	.37	.45	.39	.35	.32
5.0	.53	.44	.36	.51	.42	.35	.47	.39	.33	.43	.37	.31	.40	.34	.30	.27
6.0	.48	.38	.31	.46	.37	.30	.42	.34	.29	.39	.32	.27	.36	.30	.25	.23
7.0	.43	.33	.27	.41	.32	.26	.38	.30	.25	.35	.28	.24	.32	.27	.22	.20
8.0	.39	.30	.24	.37	.29	.23	.35	.27	.22	.32	.25	.21	.30	.24	.20	.17
9.0	.35	.27	.21	.34	.26	.20	.32	.24	.19	.29	.23	.18	.27	.22	.17	.15
10.0	.32	.24	.19	.31	.23	.18	.29	.22	.17	.27	.21	.17	.25	.20	.16	.14



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## ÖLÇÜM RAPORU MEASUREMENT REPORT

### 2.3 Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)

#### WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	
pw																
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.402	.228	.072	.389	.222	.071	.366	.210	.067	.345	.199	.064	.325	.188	.061	
2.0	.347	.190	.058	.336	.185	.057	.315	.175	.054	.296	.166	.052	.278	.157	.050	
3.0	.308	.164	.049	.298	.159	.048	.279	.151	.046	.261	.143	.044	.245	.135	.042	
4.0	.276	.144	.042	.267	.140	.041	.250	.132	.040	.234	.126	.038	.219	.119	.036	
5.0	.250	.128	.037	.242	.124	.036	.226	.118	.035	.212	.112	.033	.198	.106	.032	
6.0	.229	.115	.033	.221	.112	.032	.207	.106	.031	.194	.101	.030	.181	.095	.028	
7.0	.211	.104	.030	.204	.102	.029	.191	.096	.028	.179	.092	.027	.167	.087	.026	
8.0	.195	.095	.027	.189	.093	.026	.177	.088	.025	.166	.084	.024	.155	.080	.023	
9.0	.181	.088	.024	.176	.086	.024	.165	.081	.023	.154	.077	.022	.145	.073	.021	
10.0	.169	.081	.023	.164	.079	.022	.154	.075	.021	.144	.072	.020	.135	.068	.020	

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	
pw																
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0																
1.0	.318	.318	.318	.272	.272	.272	.186	.186	.186	.107	.107	.107	.034	.034	.034	
2.0	.316	.284	.256	.270	.244	.220	.185	.168	.152	.106	.097	.089	.034	.031	.029	
3.0	.309	.261	.221	.265	.225	.191	.182	.156	.133	.105	.091	.078	.034	.029	.025	
4.0	.302	.245	.199	.259	.211	.173	.178	.147	.121	.103	.086	.071	.033	.028	.023	
5.0	.294	.233	.185	.253	.201	.161	.174	.140	.113	.101	.082	.067	.032	.027	.022	
6.0	.287	.223	.176	.246	.193	.153	.170	.135	.108	.098	.079	.064	.032	.026	.021	
7.0	.279	.215	.169	.240	.186	.147	.166	.130	.104	.096	.077	.062	.031	.025	.020	
8.0	.272	.208	.164	.234	.181	.143	.162	.127	.101	.094	.075	.060	.030	.024	.020	
9.0	.265	.203	.160	.228	.176	.139	.158	.124	.099	.092	.073	.059	.030	.024	.020	
10.0	.259	.198	.157	.223	.172	.137	.154	.121	.097	.090	.071	.058	.029	.023	.019	



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## ÖLÇÜM RAPORU MEASUREMENT REPORT

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### 2.3 Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)

#### 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	4.0	5.4	4.5	5.9	6.4	4.6	6.0	5.1	6.5	7.1
3H	5.7	7.0	6.2	7.6	8.1	7.1	8.5	7.7	9.0	9.6
4H	6.4	7.6	6.9	8.2	8.8	8.5	9.8	9.1	10.3	10.9
6H	6.8	8.0	7.4	8.6	9.2	10.0	11.2	10.6	11.8	12.4
8H	7.0	8.1	7.6	8.7	9.4	10.8	12.0	11.4	12.6	13.2
12H	7.1	8.2	7.7	8.8	9.4	11.8	12.9	12.4	13.5	14.1
4H 2H	5.1	6.3	5.6	6.9	7.5	5.5	6.8	6.0	7.3	7.9
3H	7.2	8.3	7.8	8.9	9.6	8.2	9.4	8.8	9.9	10.6
4H	8.1	9.1	8.7	9.7	10.4	9.8	10.8	10.4	11.4	12.1
6H	8.8	9.7	9.4	10.3	11.0	11.4	12.3	12.1	13.0	13.7
8H	9.0	9.9	9.7	10.5	11.3	12.3	13.2	13.0	13.8	14.6
12H	9.2	10.0	9.8	10.6	11.4	13.4	14.2	14.0	14.8	15.6
8H 4H	9.1	9.9	9.7	10.6	11.3	10.3	11.2	11.0	11.8	12.6
6H	10.2	10.9	10.9	11.6	12.4	12.3	13.0	13.0	13.7	14.5
8H	10.7	11.3	11.4	12.0	12.8	13.4	14.0	14.1	14.7	15.5
12H	11.0	11.6	11.8	12.3	13.2	14.7	15.2	15.4	15.9	16.8
12H 4H	9.3	10.1	10.0	10.7	11.5	10.4	11.2	11.1	11.9	12.6
6H	10.7	11.3	11.4	12.0	12.8	12.5	13.1	13.2	13.8	14.6
8H	11.4	11.9	12.1	12.6	13.5	13.7	14.3	14.4	15.0	15.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 40.37 lm Total Lamp Luminous Flux. (8log(F/F0) = -11.2)



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**ÖLÇÜM RAPORU**  
**MEASUREMENT REPORT****2.3****Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)****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	46	33	25	45	32	25	43	32	25	18
0.80	55	41	33	53	41	33	51	39	32	24
1.00	63	49	40	61	48	40	58	49	39	30
1.25	70	57	48	68	55	47	63	53	45	36
1.50	75	62	53	73	61	52	68	58	51	40
2.00	83	71	62	80	69	61	74	65	58	47
2.50	87	77	68	84	74	67	78	70	64	51
3.00	91	82	74	88	79	72	81	74	68	55
4.00	96	88	81	93	85	79	86	79	74	60
5.00	99	92	86	96	89	83	88	83	78	64
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

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**2.3**

**Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**

**ISOCANDELA DIAGRAM**



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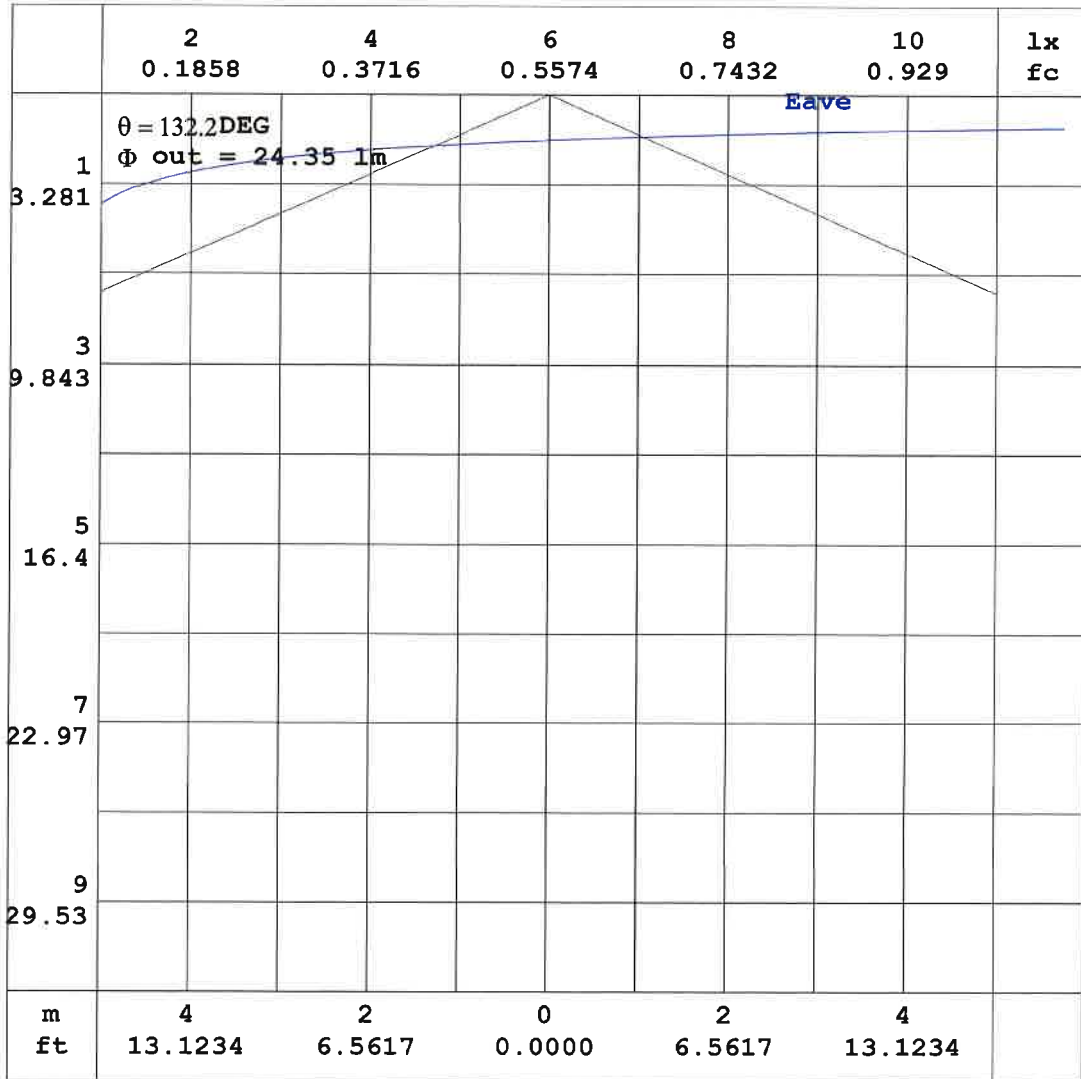
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## 2.3

**Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**

## AAI CURVES



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

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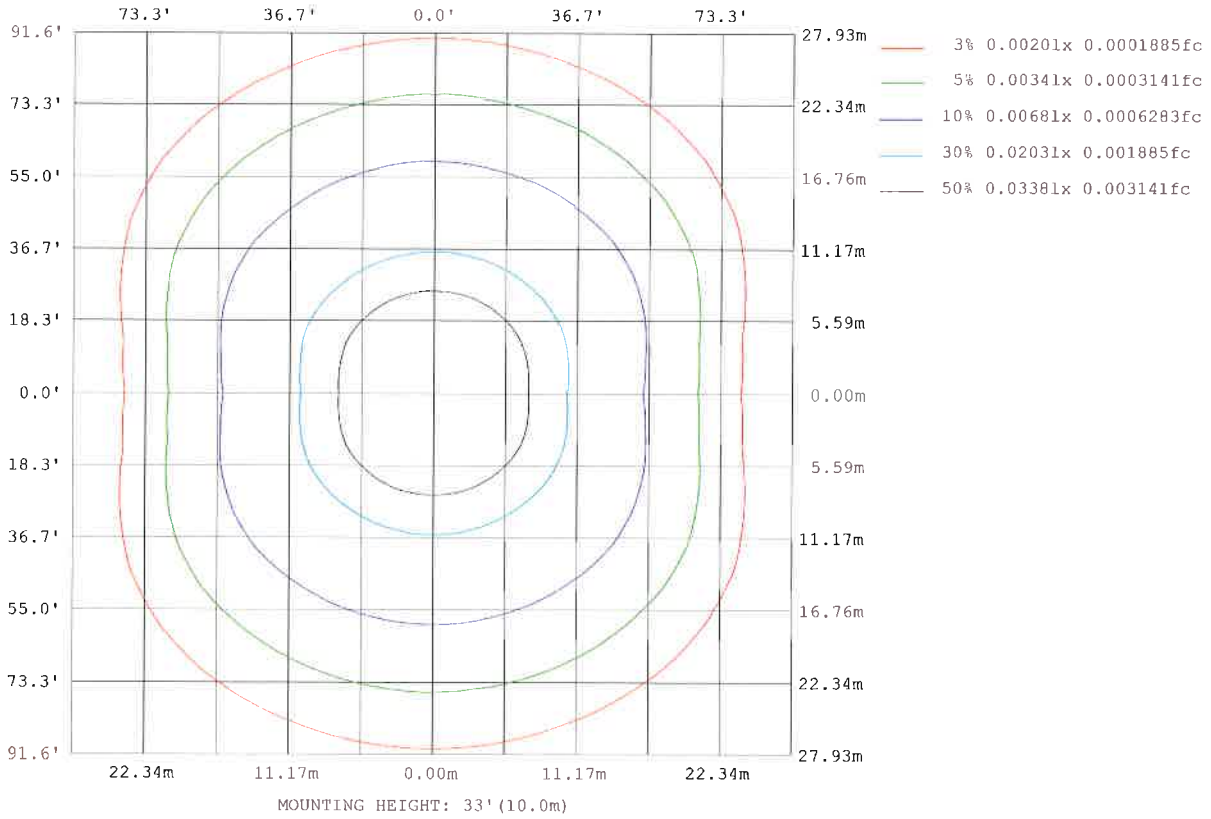
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**2.3**

**Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**

**ISOLUX DIAGRAM**



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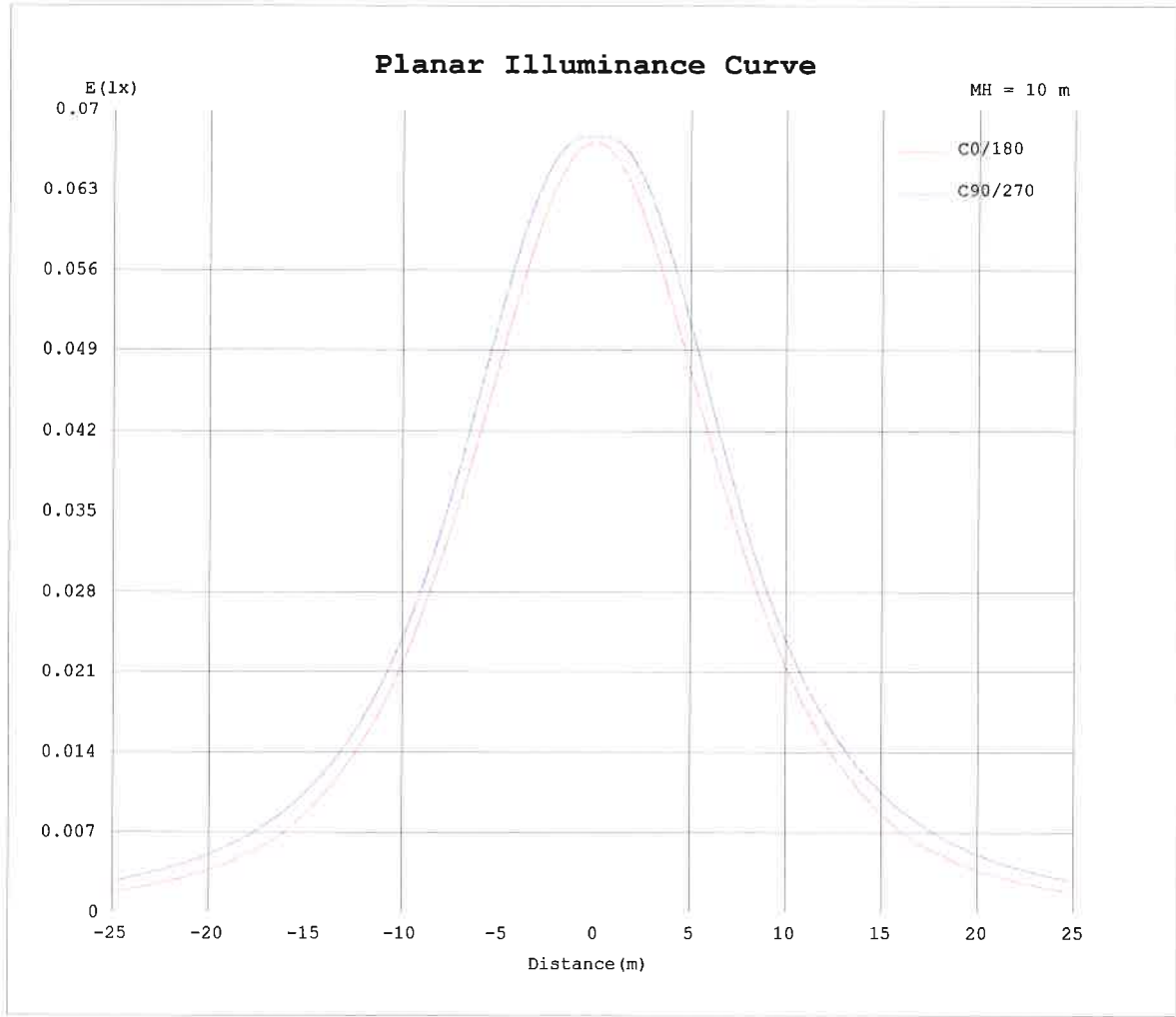
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**2.3**

**Mavi renk Fotometrik Deney Sonuçları (Photometric Test Results of the Blue color)**



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## 2.4

**Mavi Renk Spektrokolorimetrik Deney Sonuçları** (Spectrocolorimetric Test Results of the Blue color)**Elektriksel Ölçümler**

(Electrical Measurements)

<b>Ölçülen Güç (W)</b> (Input Power)	7,262
<b>Ölçülen Gerilim (V)</b> (Input Voltage)	48 VDC
<b>Ölçülen Akım (A)</b> (Input Current)	0,1513
<b>Güç Faktörü (PF)</b> (Power Factor)	-
<b>Ölçülen Frekans (Hz)</b> (Input Frequency)	-
<b>Ortam Sıcaklığı / Bağıl Nem</b> (Ambient Temperature / Relative Humidity)	25,1 °C 48% Rh
<b>Stabilizasyon Süresi</b> (Stabilization Time)	60 dk ±5dk

**Spektrokolorimetrik Ölçüm Sonuçları**

(Spectrocolorimetric Measurement Results)

<b>Chrom x</b>	0,1268
<b>Chrom y</b>	0,0913
<b>Duv</b>	0,00
<b>Chrom u'</b>	0,1320
<b>Chrom v'</b>	0,2139
<b>Peak</b>	469 nm
<b>Dominant</b>	473 nm
<b>CCT</b>	0 K
<b>Nominal CCT</b>	-
<b>Ra(CRI)</b>	0
<b>R9</b>	0
<b>S/P Ratio</b>	13,0
<b>Preburning time</b>	1 hr
<b>Test Configuration</b>	4π



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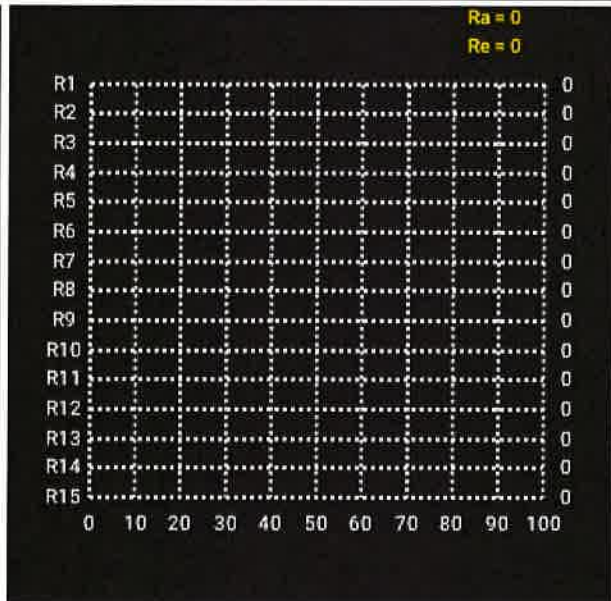
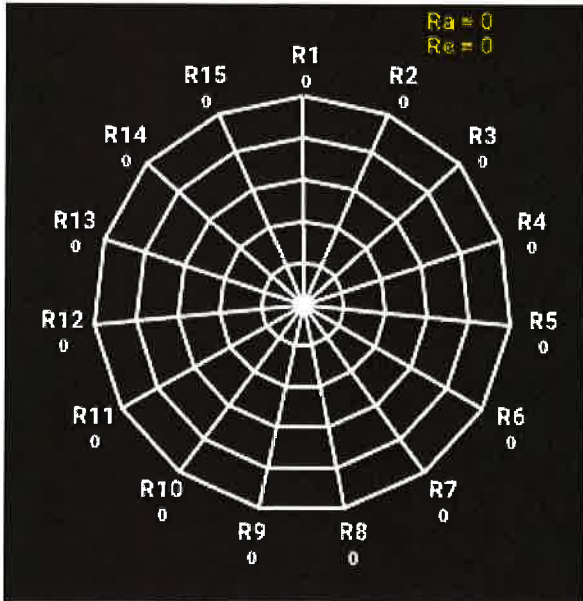
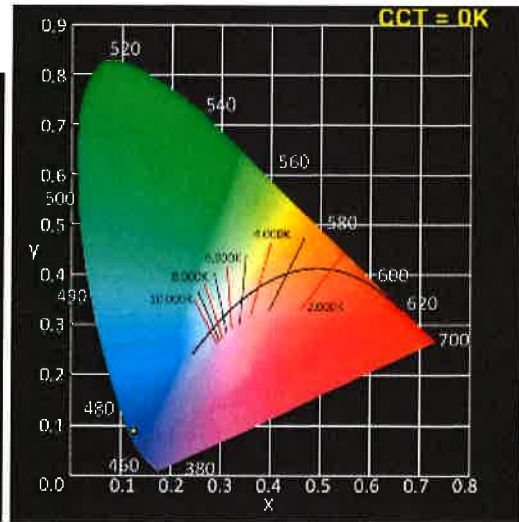
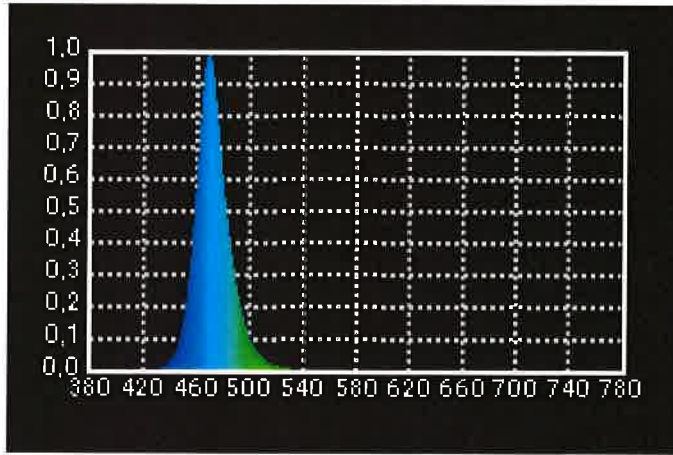
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2.4

**Mavi Renk Spektrokolorimetrik Deney Sonuçları** (Spectrocolorimetric Test Results of the Blue color)



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### 2.5 RGB Renk Deney Sonuçları ( Test Results of the RGB Color)

#### Elektriksel Ölçümler (Electrical Measurements)

Ölçülen Güç (W) (Input Power)	15,36
Ölçülen Gerilim (V) (Input Voltage)	48 VDC
Ölçülen Akım (A) (Input Current)	0,32
Güç Faktörü (PF) (Power Factor)	-
Ölçülen Frekans (Hz) (Input Frequency)	-
Ortam Sıcaklığı / Bağıl Nem (Ambient Temperature / Relative Humidity)	25 °C 50% Rh
Stabilizasyon Süresi (Stabilization Time)	30 dk ±5dk

#### Fotometrik Ölçüm Sonuçları (Photometric Measurement Results)

Toplam Işık Akısı (Total Luminous Flux) (lm)	246,39
Maksimum Işık Şiddeti (Max. Light Intensity) (cd)	45,72
Armatür Etkinliği (Luminaire Efficacy) (lm/W)	16,04



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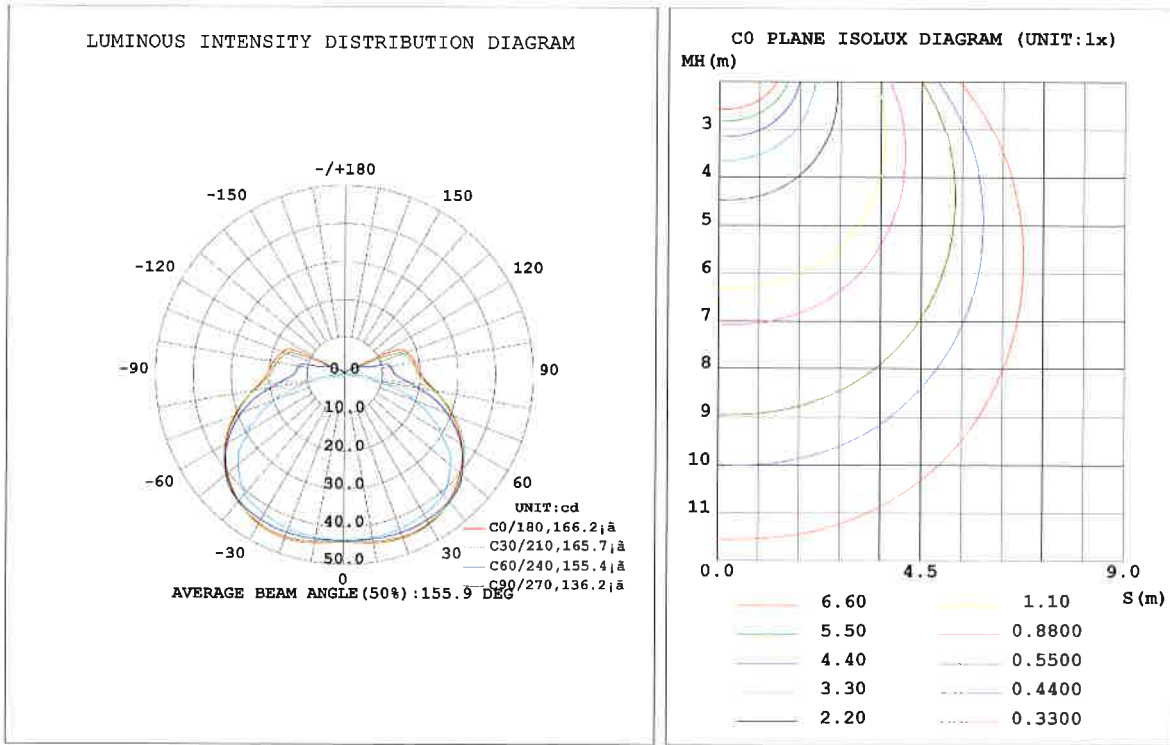
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**2.5 RGB renk Fotometrik Deneş Sonuřları (Photometric Test Results of the RGB color)**



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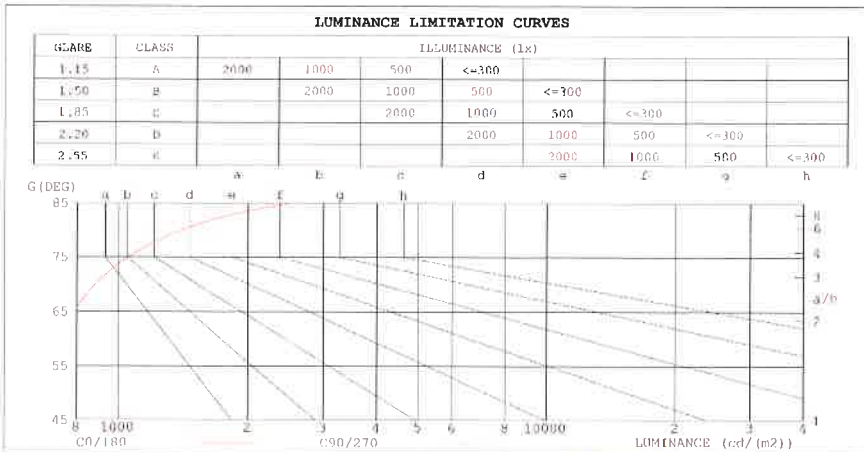
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**2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)**

**ZONAL FLUX DIAGRAM:**

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum.lamp
5	44.39	43.85	43.52	43.85	44.39	43.85	43.52	43.85	0- 5	1.048	1.048	0.43,0.43
10	44.95	44.16	43.43	44.16	44.95	44.16	43.43	44.16	5- 10	3.152	4.201	1.7,1.7
15	45.43	44.48	43.27	44.48	45.43	44.48	43.27	44.48	10- 15	5.258	9.459	3.84,3.84
20	45.70	44.69	43.02	44.69	45.70	44.69	43.02	44.69	15- 20	7.336	16.79	6.82,6.82
25	45.64	44.77	42.69	44.77	45.64	44.77	42.69	44.77	20- 25	9.345	26.14	10.6,10.6
30	45.22	44.63	42.27	44.63	45.22	44.63	42.27	44.63	25- 30	11.24	37.38	15.2,15.2
35	44.45	44.24	41.74	44.24	44.45	44.24	41.74	44.24	30- 35	12.97	50.34	20.4,20.4
40	43.32	43.55	40.90	43.55	43.32	43.55	40.90	43.55	35- 40	14.48	64.83	26.3,26.3
45	41.83	42.52	38.90	42.52	41.83	42.52	38.90	42.52	40- 45	15.69	80.51	32.7,32.7
50	40.16	41.13	36.66	41.13	40.16	41.13	36.66	41.13	45- 50	16.50	97.01	39.4,39.4
55	38.23	39.23	33.57	39.23	38.23	39.23	33.57	39.23	50- 55	16.92	113.9	46.2,46.2
60	35.99	36.84	28.79	36.84	35.99	36.84	28.79	36.84	55- 60	16.86	130.8	53.1,53.1
65	33.34	34.04	25.00	34.04	33.34	34.04	25.00	34.04	60- 65	16.31	147.1	59.7,59.7
70	30.39	30.79	19.57	30.79	30.39	30.79	19.57	30.79	65- 70	15.21	162.3	65.9,65.9
75	27.41	27.10	13.64	27.10	27.41	27.10	13.64	27.10	70- 75	13.69	176.0	71.4,71.4
80	24.50	23.37	8.109	23.37	24.50	23.37	8.109	23.37	75- 80	11.86	187.9	76.2,76.2
85	21.99	20.11	3.658	20.11	21.99	20.11	3.658	20.11	80- 85	10.02	197.9	80.3,80.3
90	20.41	18.02	0.3140	18.02	20.41	18.02	0.3140	18.02	85- 90	8.542	206.4	83.8,83.8
95	19.66	17.24	0.4223	17.24	19.66	17.24	0.4223	17.24	90- 95	7.834	214.3	87.87
100	19.03	16.55	0.3695	16.55	19.03	16.55	0.3695	16.55	95-100	7.476	221.7	90.90
105	18.28	15.72	0.2976	15.72	18.28	15.72	0.2976	15.72	100-105	6.891	228.6	92.8,92.8
110	17.42	11.78	0.2171	11.78	17.42	11.78	0.2171	11.78	105-110	5.986	234.6	95.2,95.2
115	15.81	5.567	0.1876	5.567	15.81	5.567	0.1876	5.567	110-115	4.652	239.3	97.1,97.1
120	5.569	4.281	0.1701	4.281	5.569	4.281	0.1701	4.281	115-120	2.611	241.9	98.2,98.2
125	2.382	3.422	0.0801	3.422	2.382	3.422	0.0801	3.422	120-125	1.336	243.2	98.7,98.7
130	2.039	2.644	0	2.644	2.039	2.644	0	2.644	125-130	0.9641	244.2	99.1,99.1
135	1.822	2.064	0	2.064	1.822	2.064	0	2.064	130-135	0.7167	244.9	99.4,99.4
140	1.587	1.633	0	1.633	1.587	1.633	0	1.633	135-140	0.5210	245.4	99.6,99.6
145	1.387	1.252	0	1.252	1.387	1.252	0	1.252	140-145	0.3707	245.8	99.8,99.8
150	1.191	0.8988	0	0.8988	1.191	0.8988	0	0.8988	145-150	0.2569	246.1	99.9,99.9
155	0.9700	0.5585	0	0.5585	0.9700	0.5585	0	0.5585	150-155	0.1666	246.2	99.9,99.9
160	0.7403	0.3500	0	0.3500	0.7403	0.3500	0	0.3500	155-160	0.0981	246.3	100,100
165	0.4989	0.1861	0	0.1861	0.4989	0.1861	0	0.1861	160-165	0.0485	246.4	100,100
170	0.2651	0.1401	0	0.1401	0.2651	0.1401	0	0.1401	165-170	0.0189	246.4	100,100
175	0.0894	0.0498	0	0.0498	0.0894	0.0498	0	0.0498	170-175	0.0051	246.4	100,100
180	0	0	0	0	0	0	0	0	175-180	0.0003	246.4	100,100



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	2523	420
80	1411	467
75	1059	527
70	889	572
65	789	591
60	720	576
55	666	585
50	625	570
45	592	550



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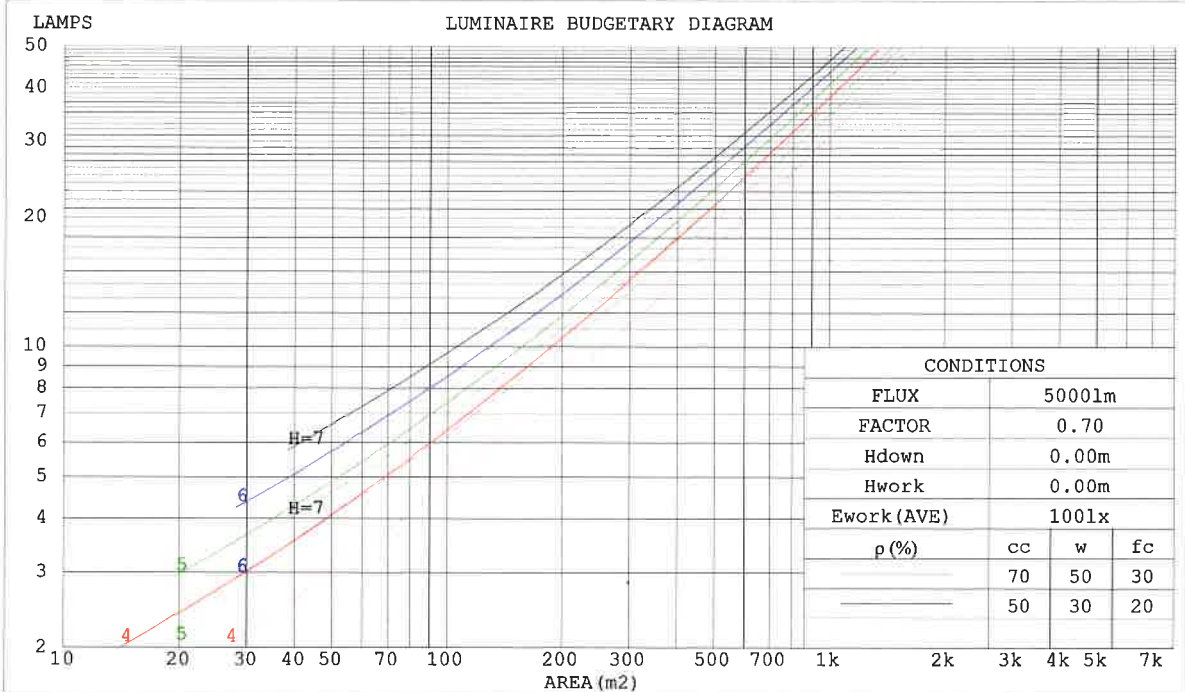
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**ÖLÇÜM RAPORU**  
**MEASUREMENT REPORT**

**2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)**

**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	1.15	1.15	1.15	1.11	1.11	1.11	1.02	1.02	1.02	.94	.94	.94	.87	.87	.87	.84
1.0	.95	.90	.85	.92	.87	.82	.84	.80	.77	.77	.74	.71	.71	.69	.66	.63
2.0	.81	.73	.66	.78	.70	.64	.71	.65	.60	.66	.61	.56	.60	.56	.53	.49
3.0	.70	.61	.53	.67	.59	.52	.62	.55	.49	.57	.51	.46	.52	.47	.43	.40
4.0	.61	.51	.44	.59	.50	.43	.54	.46	.40	.50	.43	.38	.46	.40	.36	.33
5.0	.54	.44	.37	.52	.43	.36	.48	.40	.34	.44	.37	.32	.41	.35	.30	.28
6.0	.48	.39	.32	.46	.37	.31	.43	.35	.29	.40	.33	.28	.36	.31	.26	.24
7.0	.43	.34	.27	.42	.33	.27	.39	.31	.25	.36	.29	.24	.33	.27	.23	.21
8.0	.39	.30	.24	.38	.29	.24	.35	.28	.22	.33	.26	.21	.30	.24	.20	.18
9.0	.36	.27	.21	.34	.26	.21	.32	.25	.20	.30	.24	.19	.28	.22	.18	.16
10.0	.33	.25	.19	.32	.24	.19	.30	.23	.18	.28	.21	.17	.26	.20	.16	.14



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## ÖLÇÜM RAPORU MEASUREMENT REPORT

### 2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)

#### WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfC	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.396	.225	.071	.384	.219	.069	.361	.207	.066	.340	.196	.063	.320	.186	.060	
2.0	.343	.188	.058	.332	.183	.056	.312	.173	.054	.293	.164	.051	.275	.156	.049	
3.0	.305	.162	.049	.295	.158	.048	.276	.150	.046	.259	.142	.044	.243	.135	.042	
4.0	.274	.142	.042	.265	.139	.041	.248	.132	.039	.233	.125	.038	.218	.118	.036	
5.0	.249	.127	.037	.241	.124	.036	.225	.117	.035	.211	.111	.033	.198	.106	.032	
6.0	.228	.114	.033	.220	.111	.032	.206	.106	.031	.193	.100	.030	.181	.095	.028	
7.0	.210	.104	.029	.203	.101	.029	.190	.096	.028	.178	.091	.027	.167	.087	.025	
8.0	.194	.095	.027	.188	.093	.026	.176	.088	.025	.165	.084	.024	.155	.080	.023	
9.0	.181	.087	.024	.175	.085	.024	.164	.081	.023	.154	.077	.022	.145	.073	.021	
10.0	.169	.081	.022	.164	.079	.022	.154	.075	.021	.144	.072	.020	.136	.068	.020	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfC	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.314	.314	.314	.268	.268	.268	.183	.183	.183	.105	.105	.105	.034	.034	.034	
1.0	.311	.280	.252	.266	.240	.217	.182	.165	.150	.105	.096	.087	.034	.031	.028	
2.0	.305	.257	.217	.261	.221	.188	.179	.153	.131	.103	.089	.077	.033	.029	.025	
3.0	.297	.241	.195	.255	.208	.169	.175	.144	.119	.101	.084	.070	.032	.027	.023	
4.0	.290	.228	.181	.249	.197	.157	.171	.137	.111	.099	.080	.066	.032	.026	.022	
5.0	.282	.218	.172	.242	.189	.149	.167	.132	.105	.097	.078	.062	.031	.025	.021	
6.0	.274	.210	.165	.236	.182	.143	.163	.128	.101	.094	.075	.060	.030	.025	.020	
7.0	.267	.204	.159	.230	.177	.139	.159	.124	.098	.092	.073	.059	.030	.024	.019	
8.0	.260	.198	.156	.224	.172	.136	.155	.121	.096	.090	.071	.057	.029	.023	.019	
9.0	.254	.194	.153	.219	.168	.133	.152	.118	.095	.088	.070	.056	.029	.023	.019	
10.0	.248	.189	.150	.214	.164	.131	.148	.116	.093	.087	.068	.056	.028	.022	.018	



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## ÖLÇÜM RAPORU MEASUREMENT REPORT

### 2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)

#### 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	10.9	12.3	11.4	12.8	13.3	10.4	11.8	10.8	12.3	12.8
3H	13.4	14.7	13.9	15.2	15.8	12.1	13.4	12.6	14.0	14.5
4H	14.7	16.0	15.2	16.5	17.1	12.8	14.1	13.3	14.6	15.2
6H	16.1	17.3	16.7	17.9	18.5	13.3	14.5	13.8	15.0	15.6
8H	16.9	18.1	17.5	18.7	19.3	13.4	14.6	14.0	15.1	15.8
12H	17.9	19.0	18.4	19.5	20.2	13.5	14.6	14.1	15.2	15.8
4H 2H	11.7	13.0	12.3	13.5	14.1	11.4	12.6	11.9	13.2	13.8
3H	14.4	15.5	15.0	16.1	16.8	13.5	14.6	14.1	15.2	15.8
4H	15.9	16.9	16.5	17.5	18.2	14.4	15.4	15.0	16.0	16.7
6H	17.5	18.4	18.1	19.1	19.8	15.1	16.0	15.7	16.6	17.3
8H	18.4	19.3	19.1	19.9	20.6	15.3	16.2	16.0	16.8	17.5
12H	19.5	20.2	20.1	20.9	21.6	15.5	16.3	16.1	16.9	17.7
8H 4H	16.4	17.3	17.1	17.9	18.7	15.3	16.1	15.9	16.8	17.5
6H	18.3	19.1	19.0	19.7	20.5	16.4	17.1	17.1	17.8	18.5
8H	19.4	20.1	20.1	20.8	21.6	16.9	17.5	17.5	18.2	19.0
12H	20.7	21.3	21.4	22.0	22.8	17.2	17.8	17.9	18.5	19.3
12H 4H	16.5	17.3	17.2	18.0	18.7	15.5	16.3	16.1	16.9	17.7
6H	18.5	19.2	19.2	19.9	20.7	16.8	17.5	17.5	18.1	18.9
8H	19.8	20.3	20.5	21.0	21.8	17.5	18.1	18.2	18.8	19.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.4					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 246.4 lm Total Lamp Luminous Flux. (8log(F/F0) = -4.9)



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**2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)**

**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) $k(RI) \times RCR = 5$									
$k = 0.60$	46	33	26	45	33	26	44	32	25	19
0.80	55	42	34	54	41	33	51	40	33	25
1.00	63	50	41	62	49	41	58	50	40	31
1.25	70	57	49	68	56	48	64	54	46	37
1.50	76	63	54	73	62	53	69	59	51	41
2.00	83	72	63	80	70	62	75	66	59	48
2.50	88	77	69	85	75	68	79	71	64	52
3.00	92	82	75	88	80	73	82	75	69	56
4.00	97	89	82	93	86	79	86	80	75	61
5.00	100	93	87	96	90	84	89	84	79	65
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			



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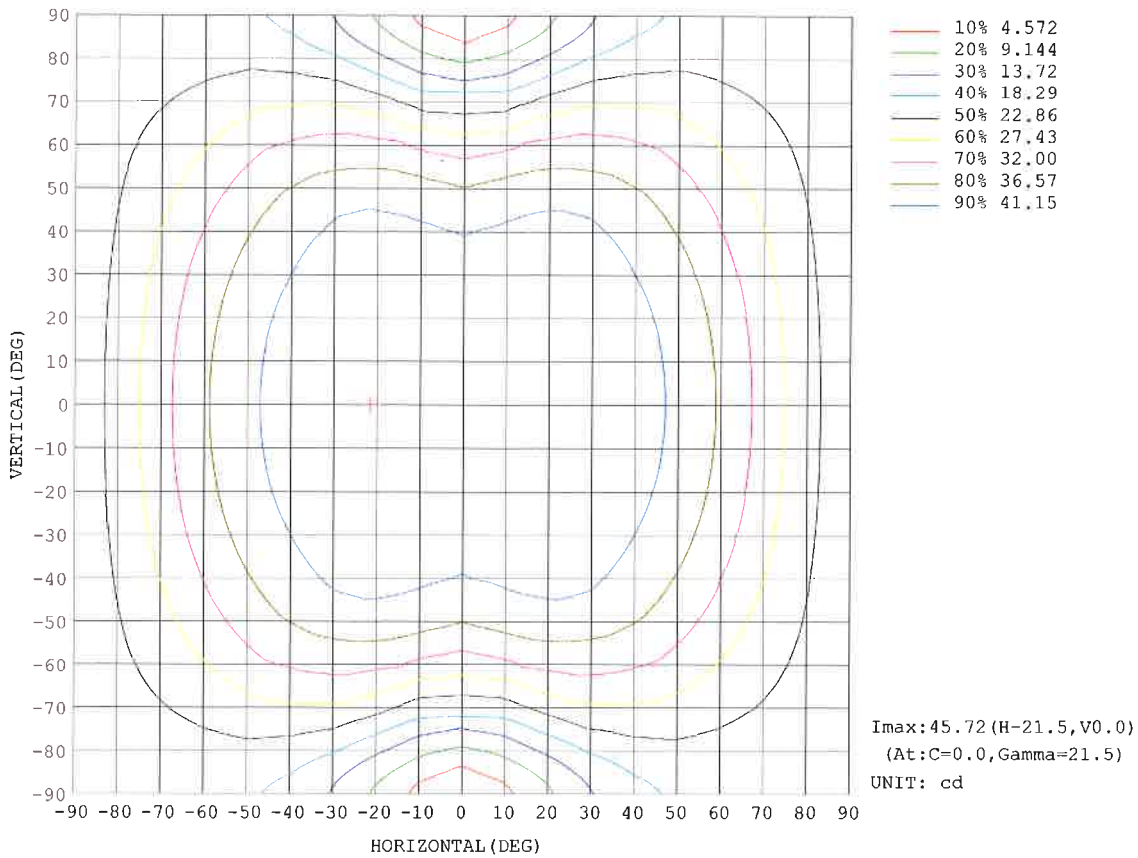
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**2.5 RGB renk Fotometrik Deneş Sonuřları (Photometric Test Results of the RGB color)**

**ISOCANDELA DIAGRAM**



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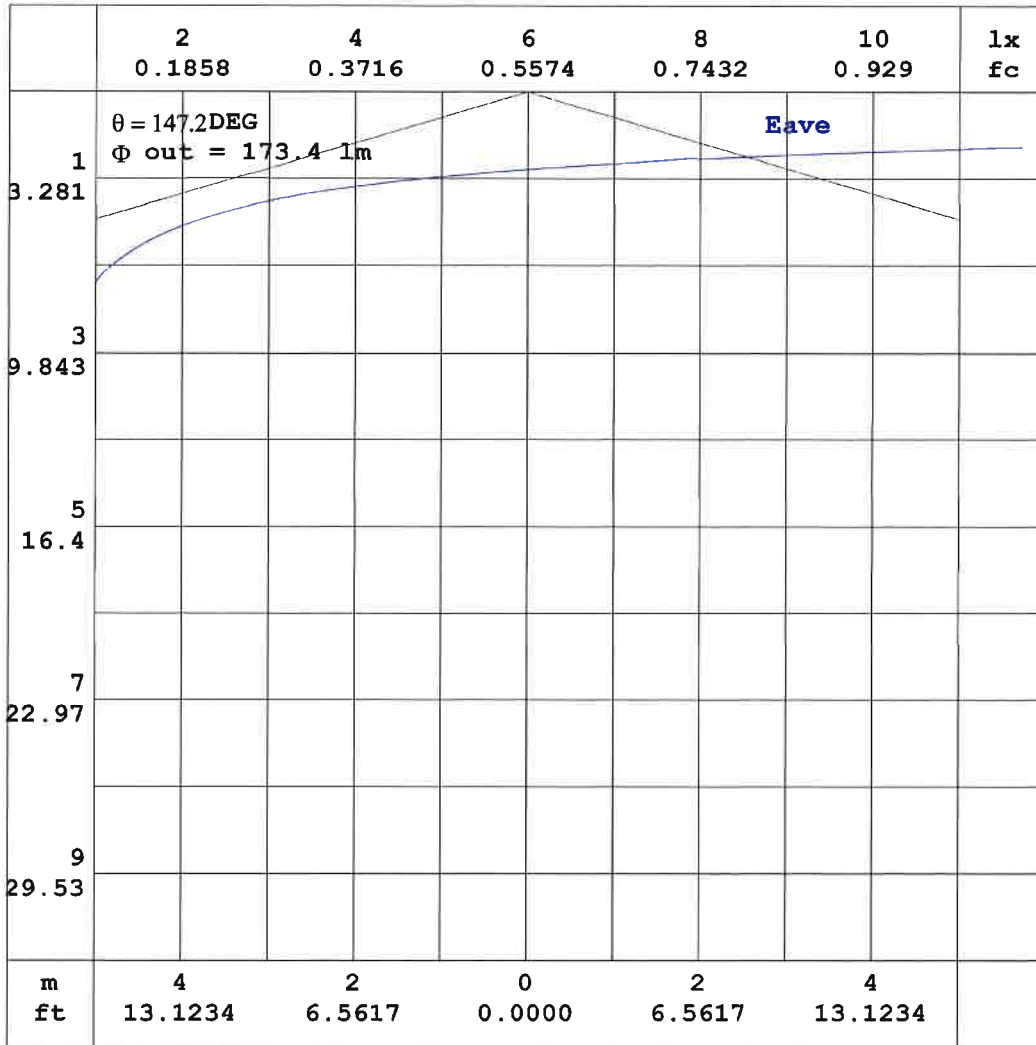
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**2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)****AAI CURVES**

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

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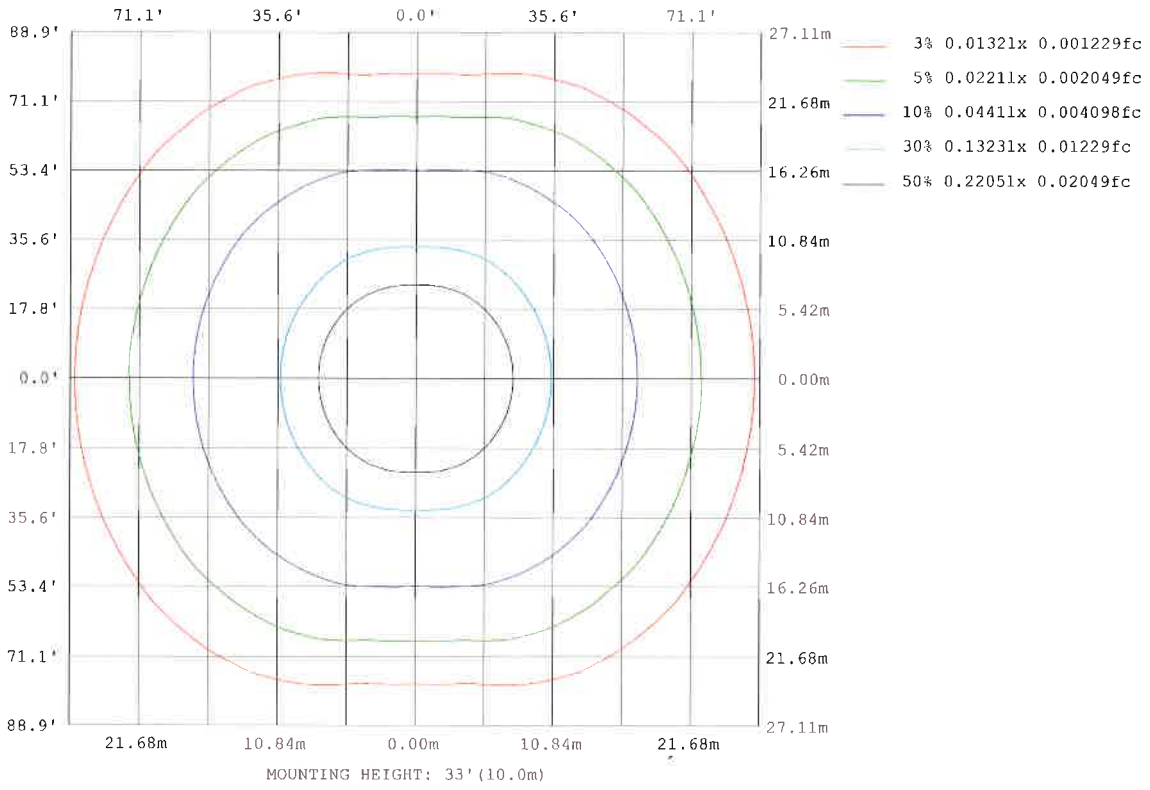
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**2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)**

**ISOLUX DIAGRAM**



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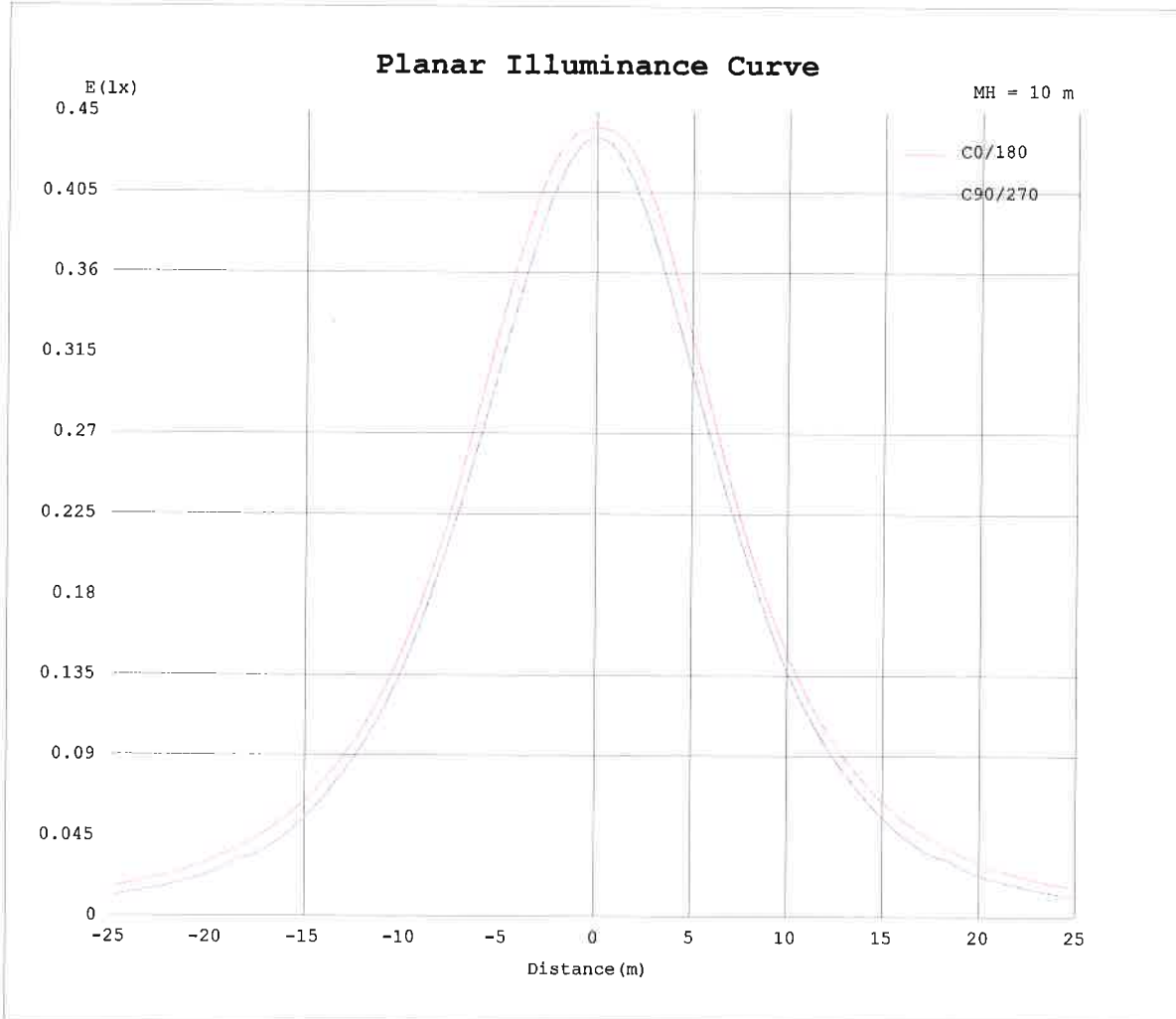
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**2.5 RGB renk Fotometrik Deney Sonuçları (Photometric Test Results of the RGB color)**



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**2.6 RGB Renk Spektrokolorimetrik Deney Sonuçları (Spectrocolorimetric Test Results of the RGB color)**

**Elektriksel Ölçümler**  
(Electrical Measurements)

<b>Ölçülen Güç (W)</b> (Input Power)	15,36
<b>Ölçülen Gerilim (V)</b> (Input Voltage)	48 VDC
<b>Ölçülen Akım (A)</b> (Input Current)	0,32
<b>Güç Faktörü (PF)</b> (Power Factor)	-
<b>Ölçülen Frekans (Hz)</b> (Input Frequency)	-
<b>Ortam Sıcaklığı / Bağıl Nem</b> (Ambient Temperature / Relative Humidity)	25 °C 50% Rh
<b>Stabilizasyon Süresi</b> (Stabilization Time)	30 dk ±5dk

**Spektrokolorimetrik Ölçüm Sonuçları**  
(Spectrocolorimetric Measurement Results)

<b>Chrom x</b>	0.2442
<b>Chrom y</b>	0.3020
<b>Duv</b>	0.0294
<b>Chrom u'</b>	0.1592
<b>Chrom v'</b>	0.4430
<b>Peak</b>	470 nm
<b>Dominant</b>	487 nm
<b>CCT</b>	Not applicable
<b>Nominal CCT</b>	4000 K
<b>Ra(CRI)</b>	64
<b>R9</b>	-102
<b>S/P Ratio</b>	3,9
<b>Preburning time</b>	1 hr
<b>Test Configuration</b>	4π



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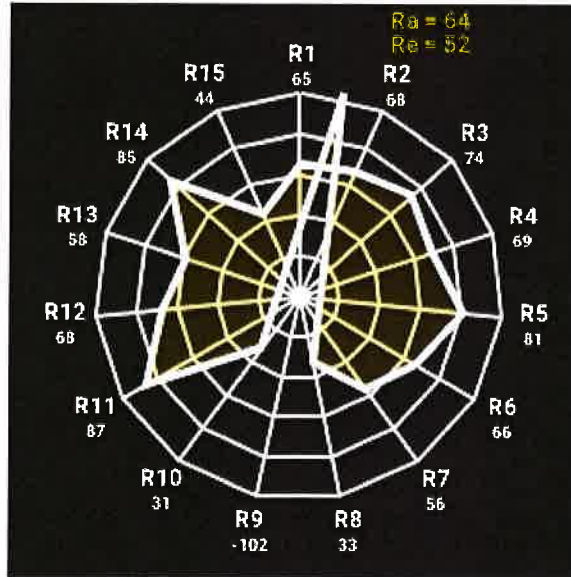
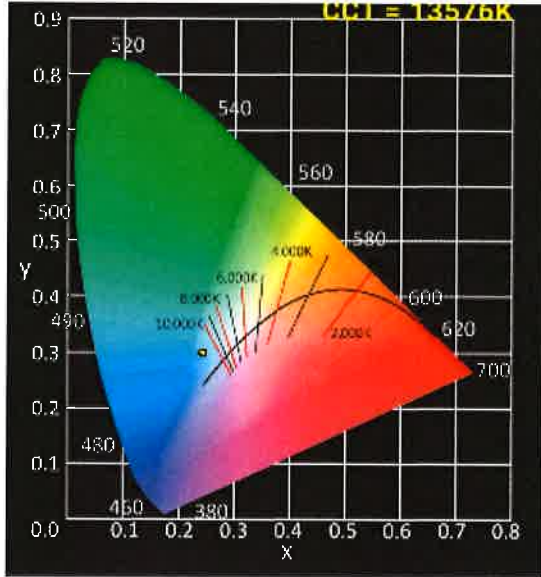
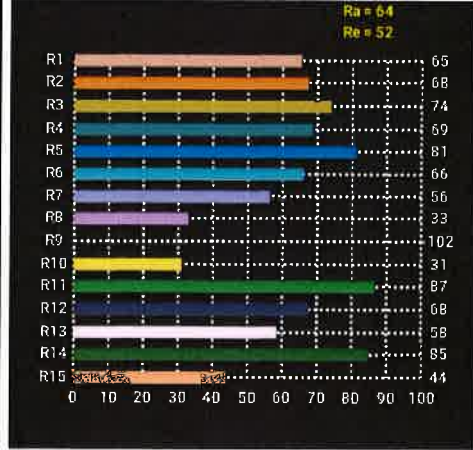
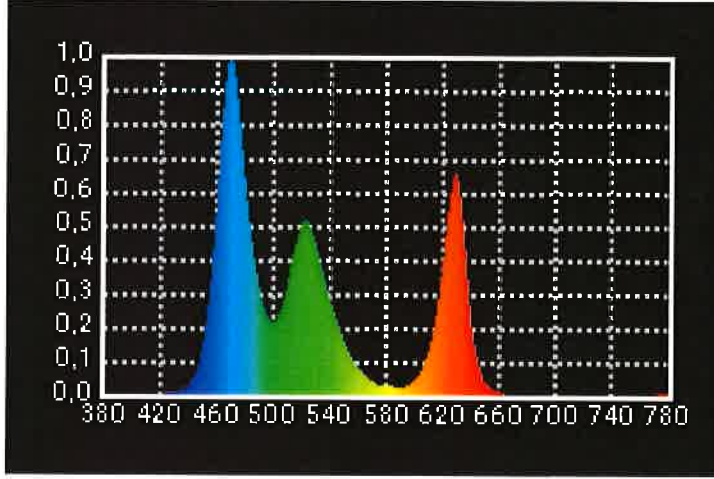
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**RGB Renk Spektrokolorimetrik Deney Sonuçları (Spectrocolorimetric Test Results of the RGB color)**



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**2.7 Yeşil Renk Deney Sonuçları ( Test Results of the Green Color)**

**Elektriksel Ölçümler**

(Electrical Measurements)

<b>Ölçülen Güç (W)</b> (Input Power)	7,25
<b>Ölçülen Gerilim (V)</b> (Input Voltage)	48 VDC
<b>Ölçülen Akım (A)</b> (Input Current)	0,1511
<b>Güç Faktörü (PF)</b> (Power Factor)	-
<b>Ölçülen Frekans (Hz)</b> (Input Frequency)	-
<b>Ortam Sıcaklığı / Bağıl Nem</b> (Ambient Temperature / Relative Humidity)	25,1 °C 48% Rh
<b>Stabilizasyon Süresi</b> (Stabilization Time)	60 dk ±5dk

**Fotometrik Ölçüm Sonuçları**

(Photometric Measurement Results)

<b>Toplam Işık Akısı</b> (Total Luminous Flux) (lm)	166,7
<b>Maksimum Işık Şiddeti</b> (Max. Light Intensity) (cd)	30,03
<b>Armatür Etkinliği</b> (Luminaire Efficacy) (lm/W)	22,99



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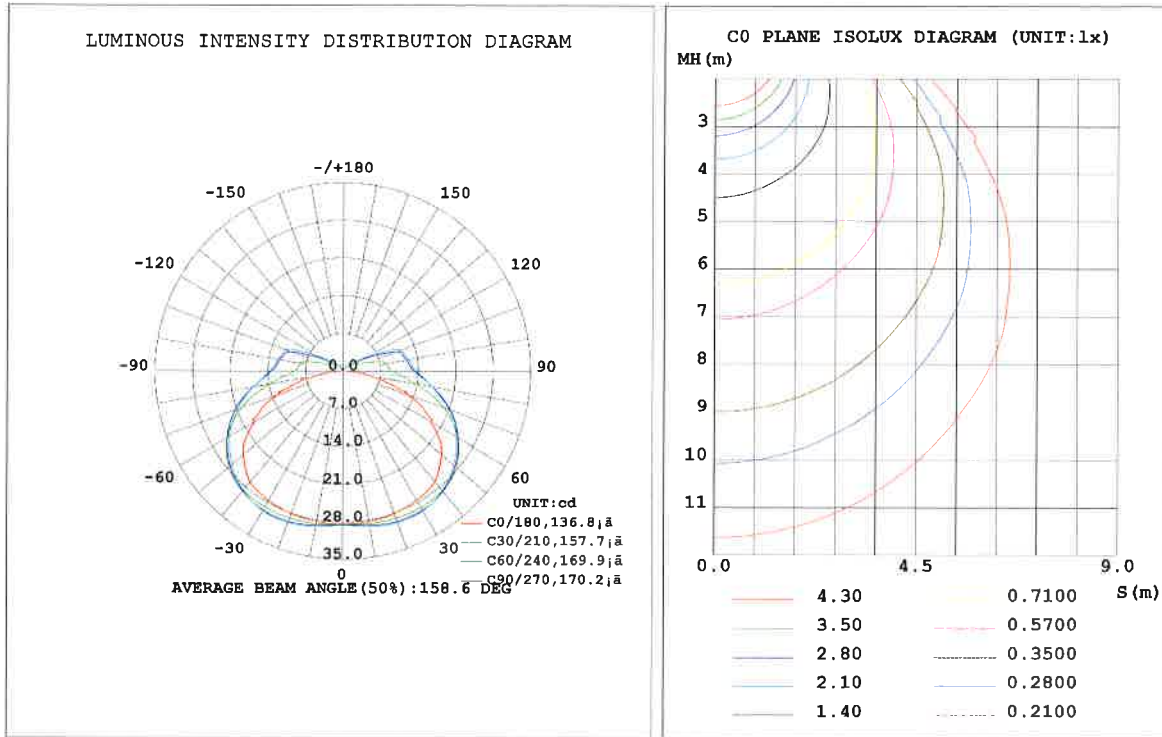
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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**



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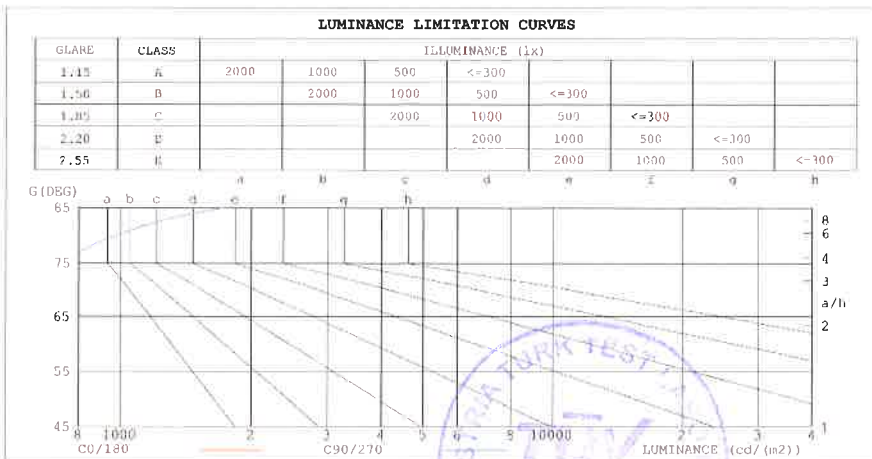
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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**

**ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES**

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	28.39	28.68	28.86	28.68	28.39	28.68	28.86	28.68	0- 5	0.6835	0.6835	0.41,0.41
10	28.34	28.93	29.28	28.93	28.34	28.93	29.28	28.93	5- 10	2.059	2.742	1.64,1.64
15	28.24	29.21	29.69	29.21	28.24	29.21	29.69	29.21	10- 15	3.440	6.192	3.71,3.71
20	28.09	29.42	29.95	29.42	28.09	29.42	29.95	29.42	15- 20	4.811	10.99	6.59,6.59
25	27.88	29.55	30.03	29.55	27.88	29.55	30.03	29.55	20- 25	6.143	17.14	10.3,10.3
30	27.62	29.55	29.88	29.55	27.62	29.55	29.88	29.55	25- 30	7.407	24.54	14.7,14.7
35	27.30	29.40	29.48	29.40	27.30	29.40	29.48	29.40	30- 35	8.574	33.12	19.9,19.9
40	26.78	29.07	28.87	29.07	26.78	29.07	28.87	29.07	35- 40	9.611	42.73	25.6,25.6
45	25.54	28.53	28.01	28.53	25.54	28.53	28.01	28.53	40- 45	10.47	53.19	31.9,31.9
50	24.10	27.75	26.93	27.75	24.10	27.75	26.93	27.75	45- 50	11.07	64.27	38.6,38.6
55	22.06	26.68	25.70	26.68	22.06	26.68	25.70	26.68	50- 55	11.41	75.68	45.4,45.4
60	18.93	25.29	24.33	25.29	18.93	25.29	24.33	25.29	55- 60	11.42	87.10	52.2,52.2
65	16.53	23.56	22.70	23.56	16.53	23.56	22.70	23.56	60- 65	11.10	98.20	58.9,58.9
70	12.95	21.51	20.86	21.51	12.95	21.51	20.86	21.51	65- 70	10.43	108.6	65.2,65.2
75	9.033	19.16	18.88	19.16	9.033	19.16	18.88	19.16	70- 75	9.452	118.1	70.8,70.8
80	5.309	16.64	16.91	16.64	5.309	16.64	16.91	16.64	75- 80	8.248	126.3	75.8,75.8
85	2.388	14.24	15.05	14.24	2.388	14.24	15.05	14.24	80- 85	6.989	133.3	80,80
90	0.1872	12.42	13.61	12.42	0.1872	12.42	13.61	12.42	85- 90	5.888	139.2	83.5,83.5
95	0.1922	11.60	12.82	11.60	0.1922	11.60	12.82	11.60	90- 95	5.220	144.4	86.6,86.6
100	0.1833	11.15	12.37	11.15	0.1833	11.15	12.37	11.15	95-100	4.945	149.4	89.6,89.6
105	0.1635	10.51	11.88	10.51	0.1635	10.51	11.88	10.51	100-105	4.590	154.0	92.4,92.4
110	0.1448	8.021	11.31	8.021	0.1448	8.021	11.31	8.021	105-110	3.973	157.9	94.7,94.7
115	0.1353	5.490	8.718	5.490	0.1353	5.490	8.718	5.490	110-115	3.043	161.0	96.6,96.6
120	0.1249	3.571	5.473	3.571	0.1249	3.571	5.473	3.571	115-120	2.017	163.0	97.8,97.8
125	0.0984	2.542	3.324	2.542	0.0984	2.542	3.324	2.542	120-125	1.287	164.3	98.5,98.5
130	0.0175	1.909	1.983	1.909	0.0175	1.909	1.983	1.909	125-130	0.8214	165.1	99.99
135	0.0083	1.453	1.426	1.453	0.0083	1.453	1.426	1.453	130-135	0.5564	165.7	99.4,99.4
140	0.0007	1.148	0.9985	1.148	0.0007	1.148	0.9985	1.148	135-140	0.3770	166.0	99.6,99.6
145	0	0.8410	0.7934	0.8410	0	0.8410	0.7934	0.8410	140-145	0.2564	166.3	99.8,99.8
150	0	0.6685	0.6490	0.6685	0	0.6685	0.6490	0.6685	145-150	0.1764	166.5	99.9,99.9
155	0	0.4804	0.4971	0.4804	0	0.4804	0.4971	0.4804	150-155	0.1143	166.6	99.9,99.9
160	0	0.3202	0.3655	0.3202	0	0.3202	0.3655	0.3202	155-160	0.0674	166.6	100,100
165	0	0.1938	0.2532	0.1938	0	0.1938	0.2532	0.1938	160-165	0.0349	166.7	100,100
170	0	0.0947	0.1423	0.0947	0	0.0947	0.1423	0.0947	165-170	0.0146	166.7	100,100
175	0	0.0256	0.0441	0.0256	0	0.0256	0.0441	0.0256	170-175	0.0040	166.7	100,100
180	0	0	0	0	0	0	0	0	175-180	0.0003	166.7	100,100



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	274	1727
80	306	974
75	349	729
70	379	610
65	391	537
60	379	487
55	385	448
50	375	419
45	361	396

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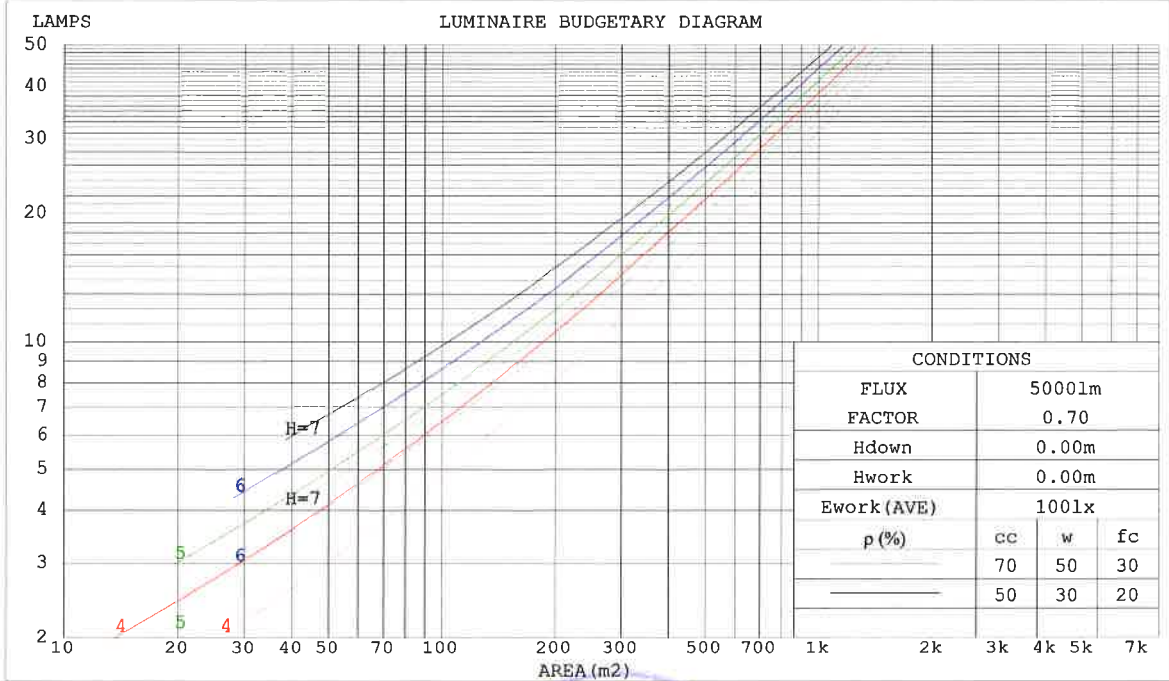
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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.15	1.15	1.15	1.11	1.11	1.11	1.02	1.02	1.02	.94	.94	.94	.87	.87	.87	.84
1.0	.95	.90	.85	.91	.86	.82	.84	.80	.76	.77	.74	.71	.71	.68	.66	.62
2.0	.81	.73	.66	.77	.70	.64	.71	.65	.60	.65	.60	.56	.60	.56	.52	.49
3.0	.70	.60	.53	.67	.58	.51	.61	.54	.48	.56	.50	.45	.52	.47	.42	.39
4.0	.61	.51	.43	.58	.49	.42	.54	.46	.40	.49	.43	.38	.45	.40	.35	.32
5.0	.54	.44	.37	.51	.42	.36	.47	.40	.34	.44	.37	.32	.40	.34	.30	.27
6.0	.48	.38	.31	.46	.37	.30	.42	.35	.29	.39	.32	.27	.36	.30	.26	.23
7.0	.43	.34	.27	.41	.33	.26	.38	.31	.25	.35	.29	.24	.33	.27	.22	.20
8.0	.39	.30	.24	.37	.29	.23	.35	.27	.22	.32	.26	.21	.30	.24	.20	.18
9.0	.35	.27	.21	.34	.26	.21	.32	.25	.20	.30	.23	.19	.27	.22	.18	.16
10.0	.33	.24	.19	.31	.24	.18	.29	.22	.18	.27	.21	.17	.25	.20	.16	.14



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### 2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)

#### WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.400	.227	.072	.387	.221	.070	.364	.209	.067	.343	.198	.063	.323	.188	.060	
2.0	.346	.190	.058	.335	.184	.057	.314	.175	.054	.295	.165	.052	.277	.157	.049	
3.0	.307	.163	.049	.297	.159	.048	.278	.151	.046	.260	.143	.044	.244	.135	.042	
4.0	.276	.143	.042	.267	.139	.041	.249	.132	.040	.234	.125	.038	.219	.119	.036	
5.0	.250	.127	.037	.242	.124	.036	.226	.118	.035	.212	.112	.033	.198	.106	.032	
6.0	.228	.115	.033	.221	.112	.032	.207	.106	.031	.194	.101	.030	.181	.095	.028	
7.0	.210	.104	.029	.204	.101	.029	.191	.096	.028	.179	.092	.027	.167	.087	.026	
8.0	.195	.095	.027	.189	.093	.026	.177	.088	.025	.166	.084	.024	.155	.080	.023	
9.0	.181	.088	.024	.175	.086	.024	.165	.081	.023	.154	.077	.022	.145	.073	.021	
10.0	.169	.081	.023	.164	.079	.022	.154	.075	.021	.145	.072	.020	.136	.068	.020	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.316	.316	.316	.270	.270	.270	.184	.184	.184	.106	.106	.106	.034	.034	.034	
1.0	.313	.282	.254	.268	.242	.219	.183	.167	.151	.106	.096	.088	.034	.031	.028	
2.0	.307	.259	.219	.263	.223	.189	.180	.154	.132	.104	.090	.077	.033	.029	.025	
3.0	.300	.243	.197	.257	.209	.171	.176	.146	.120	.102	.085	.071	.033	.028	.023	
4.0	.292	.230	.183	.251	.199	.159	.172	.139	.112	.100	.081	.066	.032	.026	.022	
5.0	.284	.221	.174	.244	.191	.151	.168	.133	.107	.097	.078	.063	.031	.026	.021	
6.0	.277	.213	.167	.238	.184	.145	.164	.129	.103	.095	.076	.061	.031	.025	.020	
7.0	.270	.206	.162	.232	.179	.141	.160	.125	.100	.093	.074	.059	.030	.024	.020	
8.0	.263	.201	.158	.226	.174	.138	.157	.122	.098	.091	.072	.058	.029	.024	.019	
9.0	.256	.196	.155	.221	.170	.135	.153	.119	.096	.089	.071	.057	.029	.023	.019	
10.0	.250	.192	.152	.216	.166	.133	.150	.117	.095	.087	.069	.056	.028	.023	.019	



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### 2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)

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	9.0	10.4	9.4	10.9	11.4	9.5	10.9	10.0	11.4	12.0	
3H	10.7	12.0	11.2	12.6	13.1	12.0	13.4	12.6	13.9	14.5	
4H	11.4	12.6	11.9	13.2	13.8	13.4	14.7	14.0	15.2	15.8	
6H	11.9	13.1	12.4	13.6	14.2	14.9	16.1	15.4	16.6	17.3	
8H	12.0	13.2	12.6	13.7	14.4	15.7	16.8	16.3	17.4	18.0	
12H	12.1	13.2	12.7	13.8	14.5	16.6	17.7	17.2	18.3	18.9	
4H	2H	10.0	11.3	10.6	11.8	12.4	10.4	11.7	10.9	12.2	12.8
3H	12.2	13.3	12.8	13.9	14.5	13.1	14.2	13.7	14.8	15.5	
4H	13.1	14.1	13.7	14.7	15.4	14.6	15.7	15.2	16.3	16.9	
6H	13.8	14.7	14.4	15.3	16.0	16.3	17.2	16.9	17.8	18.5	
8H	14.0	14.9	14.7	15.5	16.2	17.2	18.0	17.8	18.7	19.4	
12H	14.2	15.0	14.8	15.6	16.4	18.2	19.0	18.9	19.7	20.4	
8H	4H	14.0	14.9	14.7	15.5	16.2	15.2	16.1	15.8	16.7	17.4
6H	15.1	15.9	15.8	16.5	17.3	17.1	17.9	17.8	18.5	19.3	
8H	15.6	16.3	16.3	17.0	17.8	18.2	18.9	18.9	19.6	20.4	
12H	16.0	16.6	16.7	17.3	18.1	19.5	20.0	20.2	20.8	21.6	
12H	4H	14.2	15.0	14.9	15.7	16.4	15.3	16.1	15.9	16.7	17.5
6H	15.6	16.3	16.3	16.9	17.7	17.3	18.0	18.0	18.7	19.5	
8H	16.3	16.9	17.0	17.6	18.4	18.5	19.1	19.3	19.8	20.6	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					

CIE Pub.117 Corrected 166.7 lm Total Lamp Luminous Flux. (8log(F/F0) = -6.2)



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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)****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	46	33	26	45	33	25	43	32	25	18
0.80	55	42	33	54	41	33	51	40	32	24
1.00	63	50	41	61	49	40	58	49	39	31
1.25	70	57	48	68	56	47	64	53	46	36
1.50	75	63	54	73	61	53	68	58	51	41
2.00	83	71	63	80	69	61	75	66	59	47
2.50	88	77	69	84	75	67	78	70	64	52
3.00	92	82	74	88	79	72	82	75	69	56
4.00	97	88	81	93	85	79	86	80	75	61
5.00	100	92	86	96	89	84	88	83	79	64
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			



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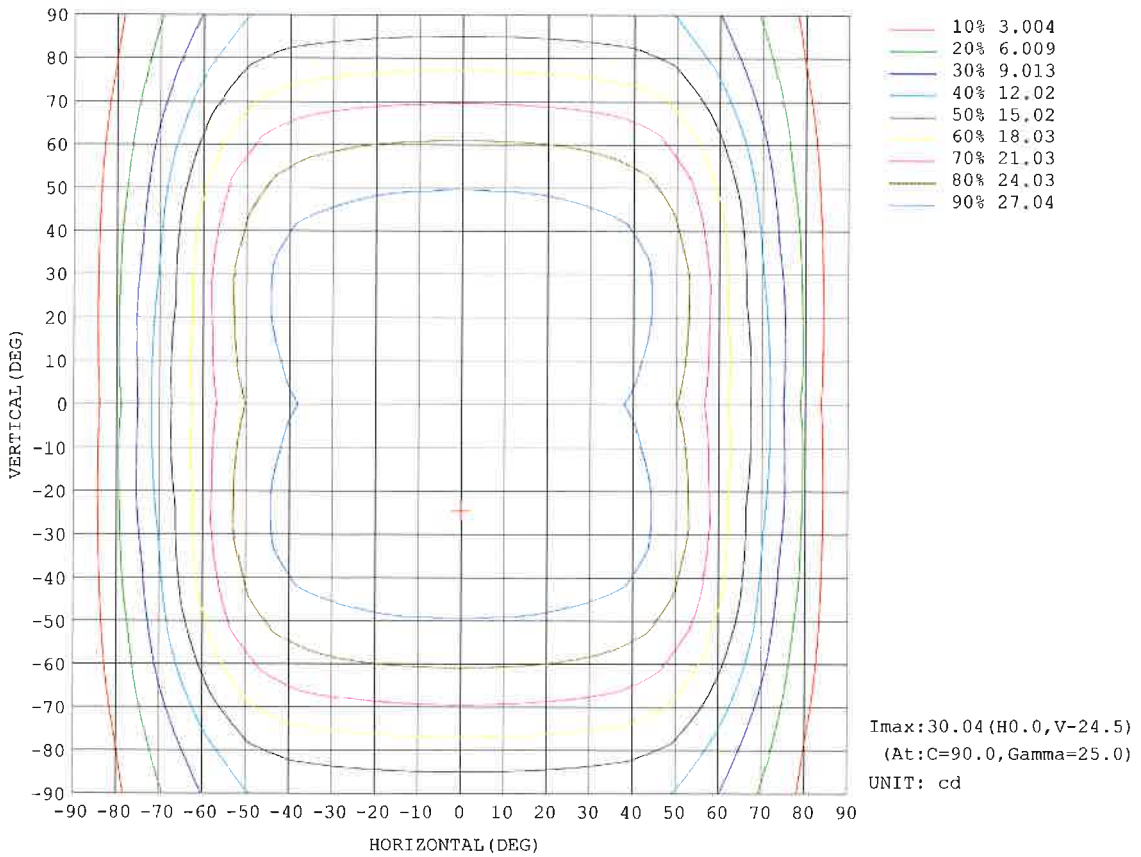
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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**

**ISOCANDELA DIAGRAM**



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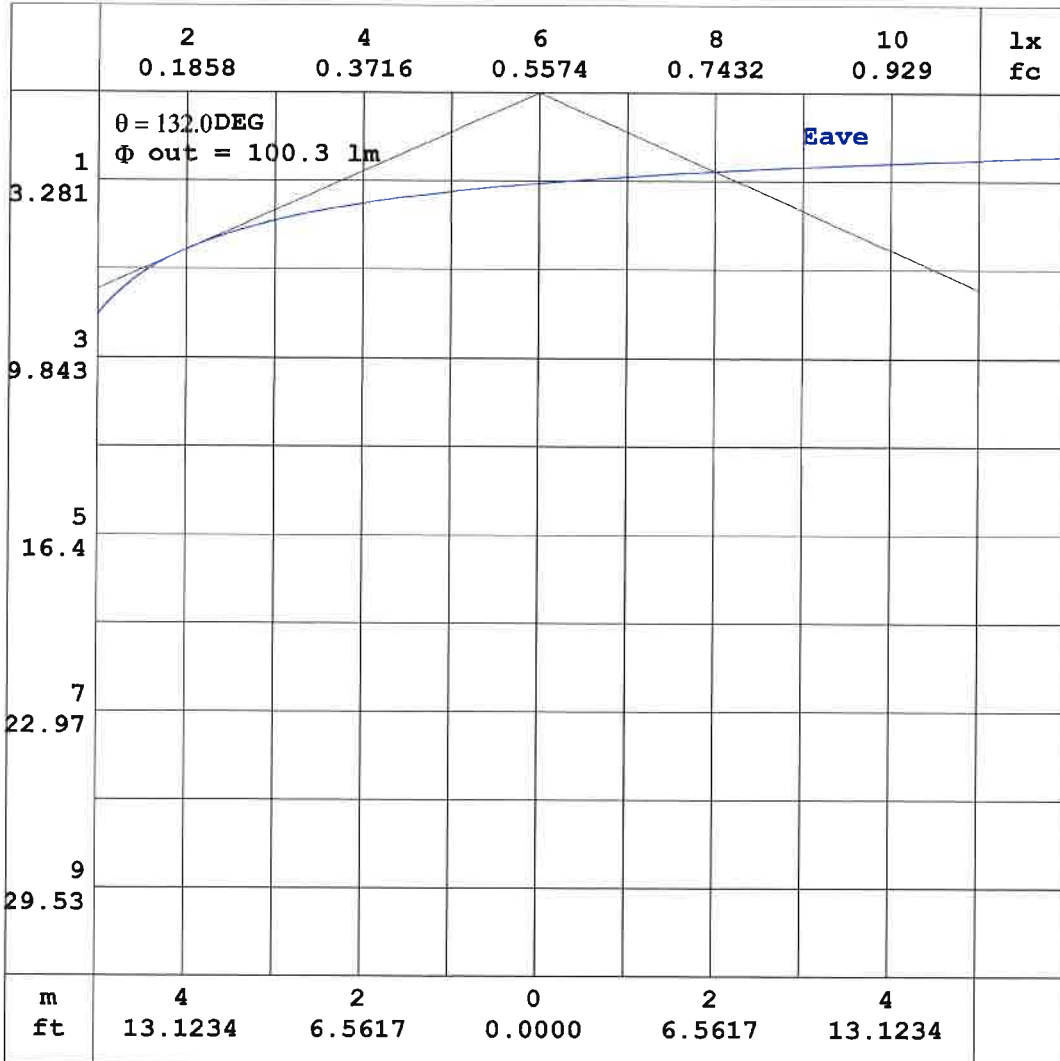
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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**

**AAI CURVES**



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

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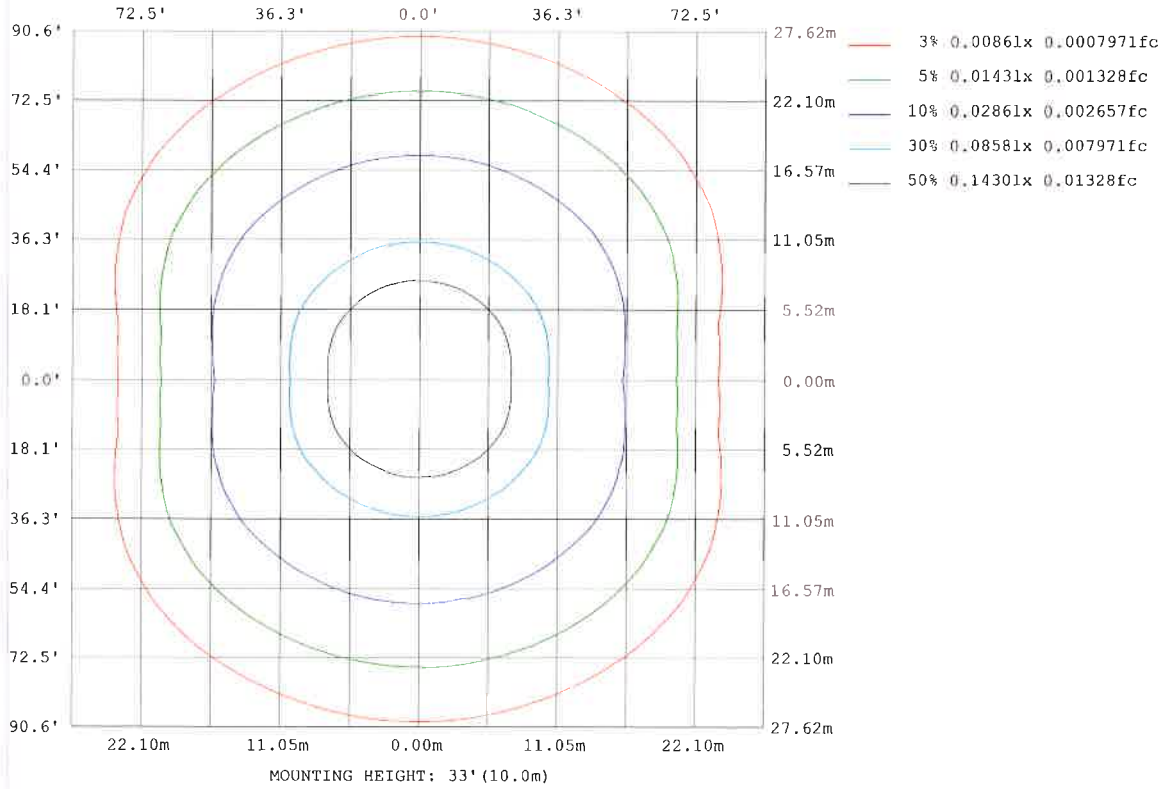
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2.7

**Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**

**ISOLUX DIAGRAM**



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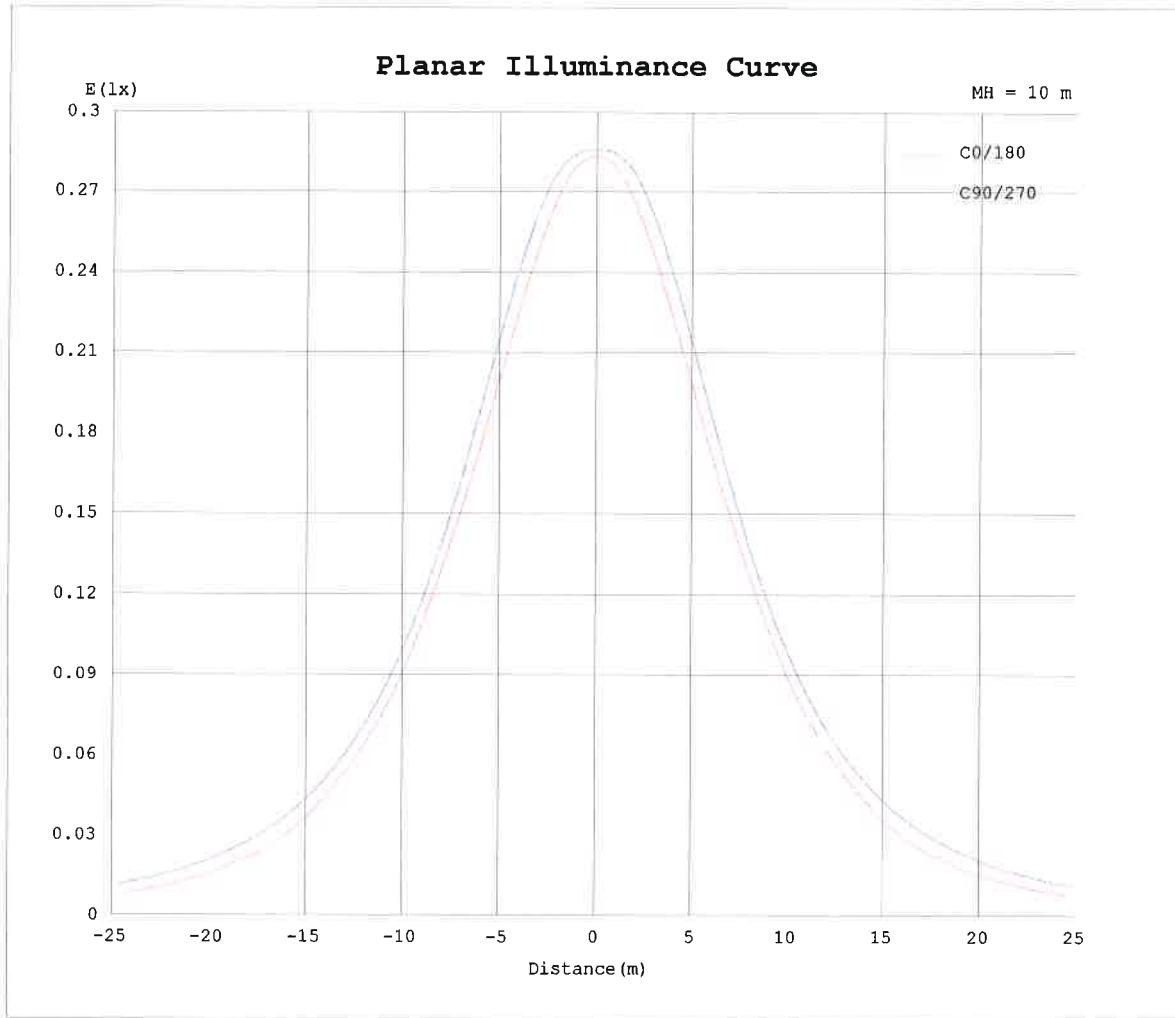
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**2.7 Yeşil renk Fotometrik Deney Sonuçları (Photometric Test Results of the Green color)**



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### 2.8 Yeşil Renk Spektrokolorimetrik Deney Sonuçları (Spectrocolorimetric Test Results of the Green color)

#### Elektriksel Ölçümler

(Electrical Measurements)

Ölçülen Güç (W) (Input Power)	7,25
Ölçülen Gerilim (V) (Input Voltage)	48 VDC
Ölçülen Akım (A) (Input Current)	0,1511
Güç Faktörü (PF) (Power Factor)	-
Ölçülen Frekans (Hz) (Input Frequency)	-
Ortam Sıcaklığı / Bağıl Nem (Ambient Temperature / Relative Humidity)	25,1 °C 48% Rh
Stabilizasyon Süresi (Stabilization Time)	60 dk ±5dk

#### Spektrokolorimetrik Ölçüm Sonuçları

(Spectrocolorimetric Measurement Results)

Chrom x	0,1916
Chrom y	0,7232
Duv	0,1513
Chrom u'	0,0678
Chrom v'	0,5762
Peak	522 nm
Dominant	531 nm
CCT	7483 K
Nominal CCT	-
Ra(CRI)	0
R9	0
S/P Ratio	2,6
Preburning time	1 hr
Test Configuration	4π



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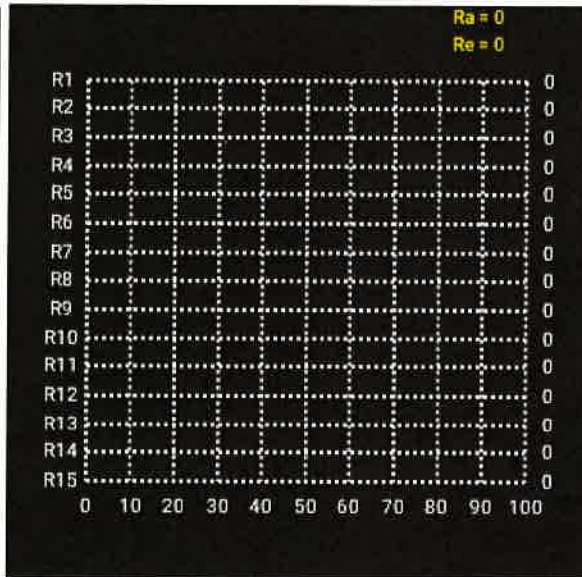
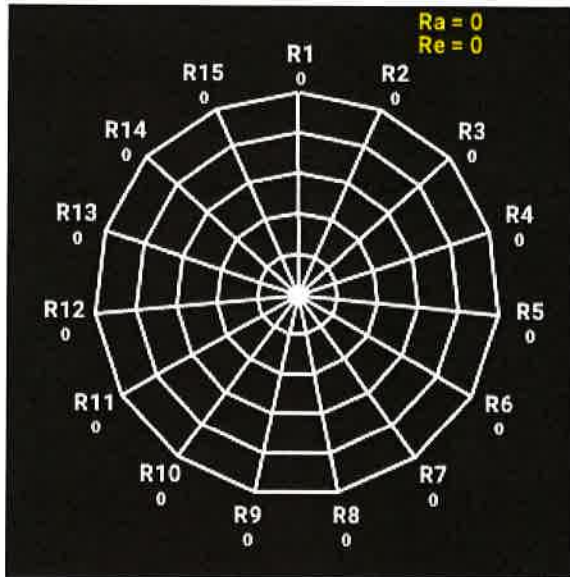
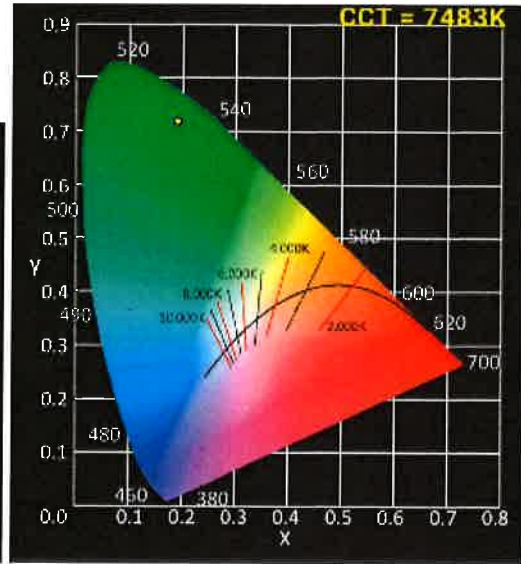
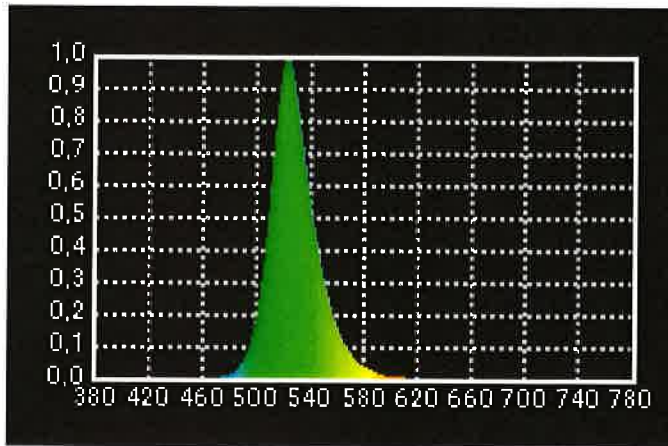
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2.8

**Yeşil Renk Spektrokolorimetrik Deney Sonuçları** (Spectrocolorimetric Test Results of the Green color)



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

