



PTC
ÜRÜN TEST VE BELGELENDİRME
SAN. TİC. LTD. ŞTİ

DENEY RAPORU
TEST REPORT

Müşteri Adı / Adresi:
Customer name / address

HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.

Güllübağlar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / İstanbul / TURKEY

Rapor ve İstek No:
Report and order no:

171801-864-6

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

Procolor DC 10DW Floodlight Medium Beam 25° P03001122

Numune Kabul Tarihi:
The date of receipt of test
item:

03.01.2020

Deneyin Yapıldığı Tarih:
Date of test:

06.01.2020

Rapor Sayfa Sayısı:
Number of pages of the
report:

20

Uygulanan Standart / Metod: IES-LM-79-08 (with TS EN13032-1)
Applied Standart / Method

Açıklamalar:
Remarks:

Test sonuçları için raporu inceleyiniz. / Review the report for test results.

Mühür / Tarih
Seal / Date
PTC
ÜRÜN TEST VE BELGELENDİRME LTD. ŞTİ.
PRODUCT TESTING AND CERTIFICATION
15.01.2020

Deneyi Yapan Personel
Person in Performing the Test

Emine Nur ÇİDEM

Laboratuvar Teknik Yöneticisi
Laboratory Technical Manager

Murat ÇİTİL

ONAY
APPROVED
Vergi No
Task Number
733 043 5931

Bu rapor, Laboratuvarımızın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürlü raporlar geçersizdir.
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Deney Rapor No / Test Report No: 171801-864-6

PTC Ürün Test ve Belgelendirme San. Tic. Ltd. Şti.

Aydınlı Mah. Patlayıcı Maddeler Yolu Cad. Beyoğlu Sanayi Sitesi. D1 Blok No:26 Tuzla/İstanbul-Turkey
Tel: +90 216 393 3232 e-mail: info@ptctestng.com web: www.ptctestng.com

FOTOMETRİK ÖLÇÜM SONUÇLARI / PHOTOMETRIC MEASUREMNT RESULTS

Kullanılan Cihaz/EquipmentUsed.....:	Goniophotometer System (LSG-1700B) Sphere System (LMS-7000)
Uygulanan Standart-Metot/Applied Standard-Method.....:	IES-LM-79-08 Electrical and Photometric Measurements of Solid-State Lighting Products TS EN13032-1:2004 +A1:2012LightandLighting Measurementand Presentation of Photometric Data of Lampsand Luminaires-Part1: Measurementand File.
Deney Ortam Şartları/ExperimentalAmbientConditions.....:	25°C ±1°C,60%RH±5%RH
Armatüre Uygulanan Gerilim / AppliedVoltage.....:	48 V dc
ArmatürMarkası-Üretici/LuminaireBrand-Producer.....:	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
ArmatürKodu-Modeli/LuminaireCode-Model.....:	Procolor DC 10DW Floodlight Medium Beam 25° P03001122

Armatürde Ölçülen Toplam Güç / Measured Total Power of Luminaire.....:	8.64 W ;
Armatürün Ölçülen Işık Akısı / Measured Luminous Flux of Luminaire.....:	331.8 lm (Effective Value)
Armatür verimliliği (lm/Watt) / Luminous efficiency.....:	38.40 lm/Watt
Beam Angle (C0/C180,C90/C270,C45/C225,C135/315):	25.3, 27.6, 27.2, 26.9

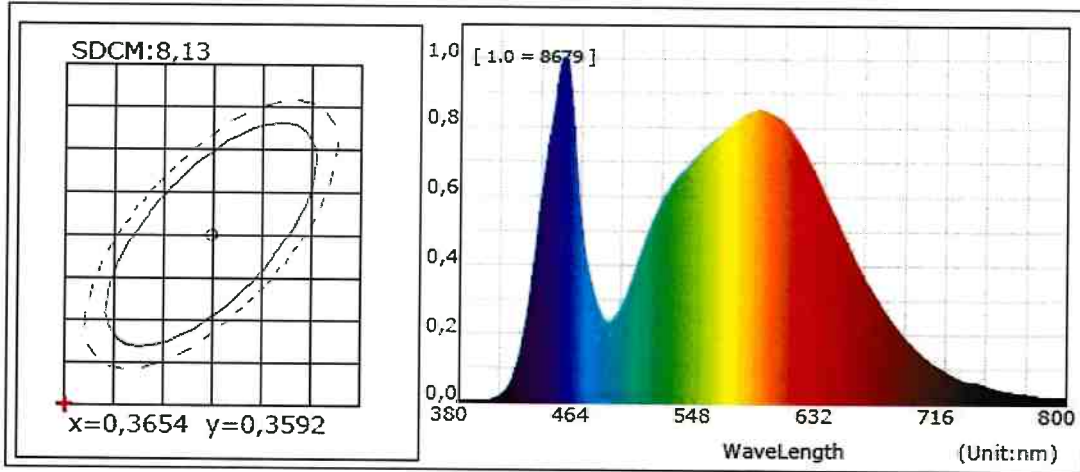
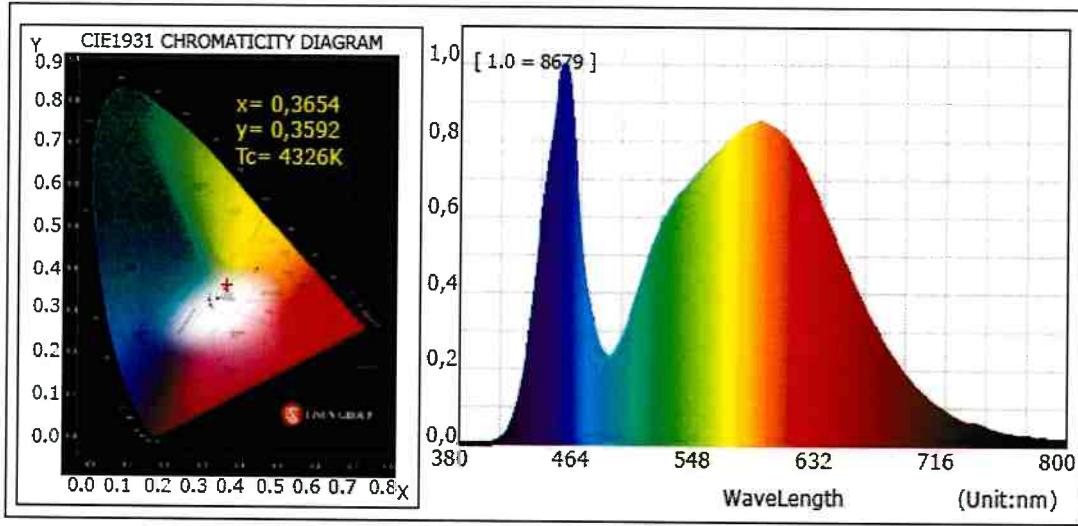
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Date/Time	06.01.2020 10:00
Chromaticity x coord	0,3654
Chromaticity y coord	0,3592
Chromaticity u coord	0,2221
Chromaticity v coord	0,3276
Chromaticity u' coord	0,2221
Chromaticity v' coord	0,4913
Peak Wavelength (nm)	452,0
Half Wavelength (nm)	30,0
Dominant Wavelength (nm)	580,7
Color Purity (%)	17,428
Correlated Color Temperature (deg. K)	4326
SDCM	8,13
Color Rendering Index Average (RA)	81,1
Color Rendering Index (R1)	80
Color Rendering Index (R2)	86
Color Rendering Index (R3)	89
Color Rendering Index (R4)	81
Color Rendering Index (R5)	80
Color Rendering Index (R6)	80
Color Rendering Index (R7)	86
Color Rendering Index (R8)	67
Color Rendering Index (R9)	11
Color Rendering Index (R10)	66
Color Rendering Index (R11)	78
Color Rendering Index (R12)	59
Color Rendering Index (R13)	81
Color Rendering Index (R14)	94
Color Rendering Index (R15)	77

DENEY RAPORU / TEST REPORT

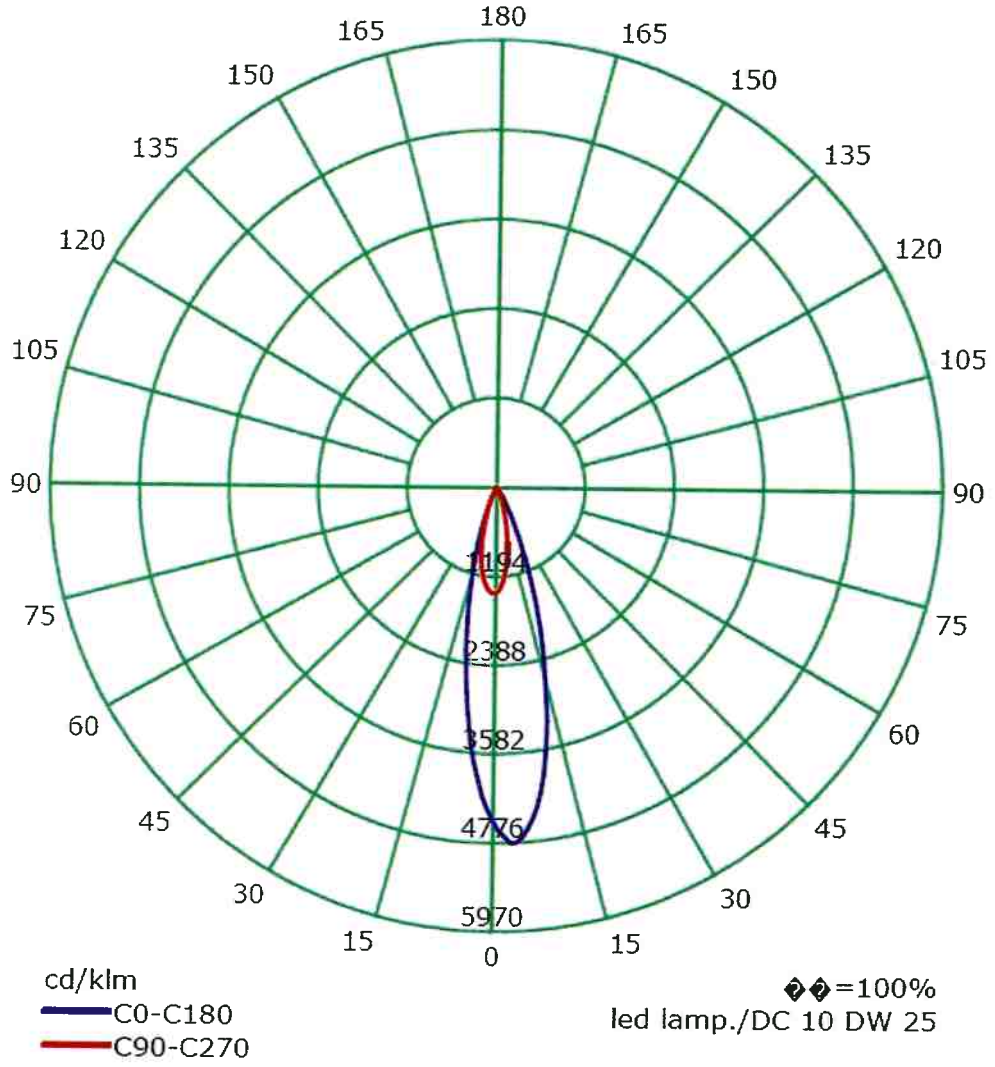
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Luminous Intensity Distribution Curve(cd/klm)



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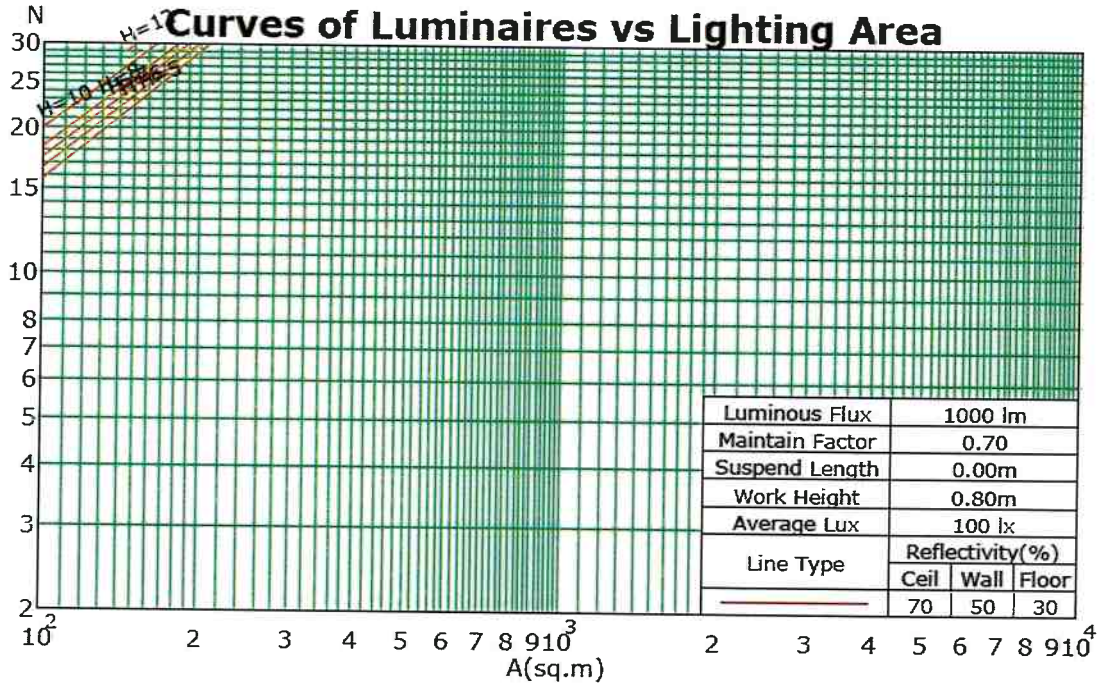
Coefficients Of Utilization - Zonal Cavity Method

RC	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.3	0.3	0.3	0.1	0.1	0.1	0
RW	0.7	0.5	0.3	0.1	0.7	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0
RCR	RF = 0.2																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	114	111	109	107	111	109	107	105	105	104	102	101	100	99	98	97	96	94
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	102	97	93	90	95	91	89	92	89	87	90	88	86	84
4	100	93	89	85	98	92	88	84	90	86	83	88	85	82	86	83	81	80
5	96	89	83	80	94	88	83	79	86	82	79	84	81	78	83	80	77	76
6	92	84	79	75	91	83	78	75	82	78	74	80	77	74	79	76	73	72
7	88	80	75	71	87	79	74	71	78	74	71	77	73	70	76	72	70	69
8	85	76	71	68	84	76	71	67	75	70	67	74	70	67	73	69	67	65
9	81	73	68	64	80	73	68	64	72	67	64	71	67	64	70	66	64	62
10	78	70	65	62	78	70	65	61	69	64	61	68	64	61	67	64	61	60

Spacing Criteria (0-180): 0.46

Spacing Criteria (90-270): 0.47

Spacing Criteria (Diagonal): 0.42



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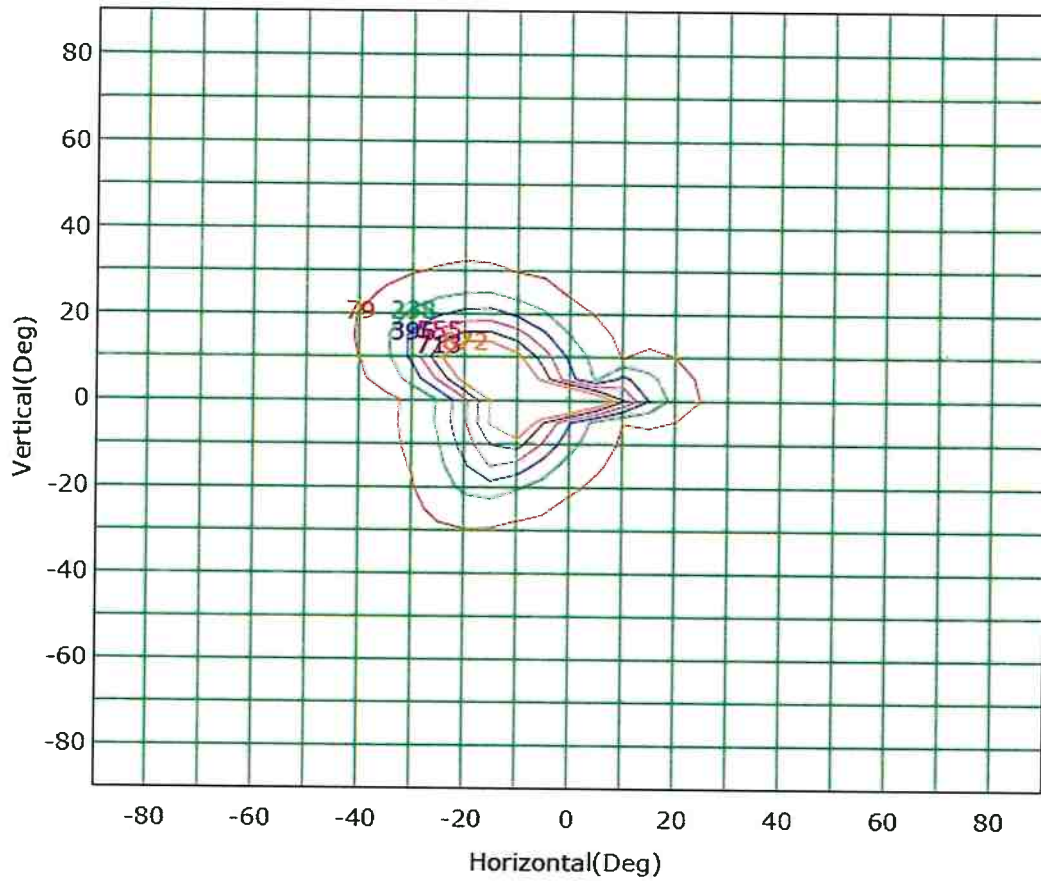
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Isocandela (rectangle)



Imax (100%): 1585 cd

— (5%): 79 cd	— (15%): 238 cd
— (25%): 396 cd	— (35%): 555 cd
— (45%): 713 cd	— (55%): 872 cd

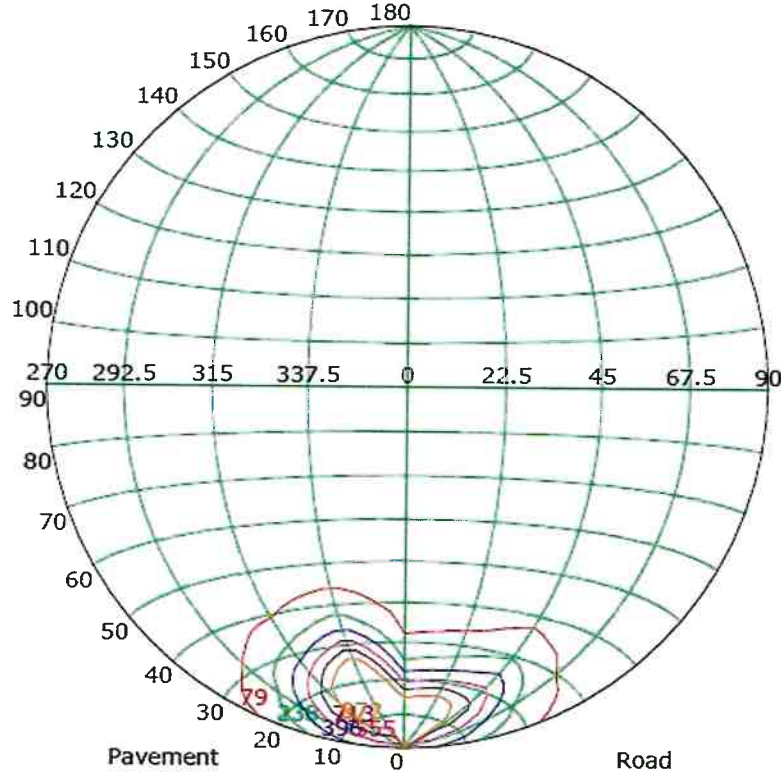
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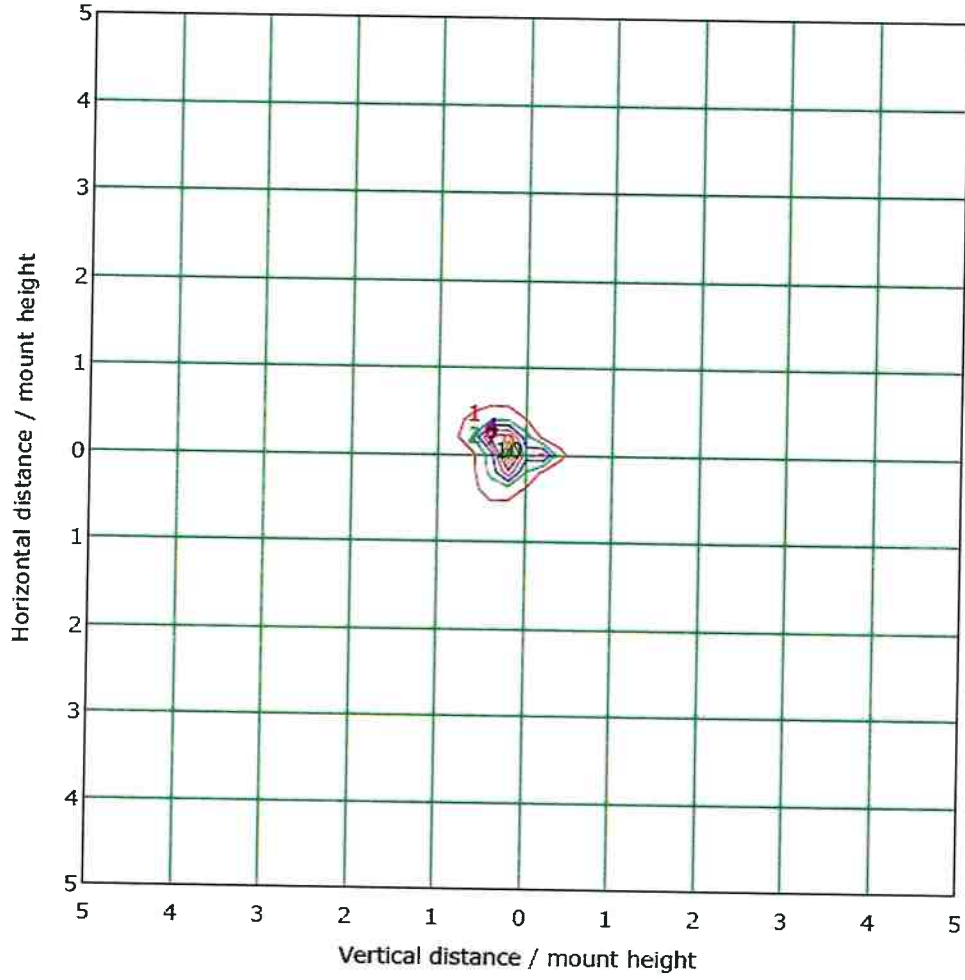
Isocandela (sphere)



Imax (100%): 1585 cd

— (5%):	79 cd	— (15%):	238 cd
— (25%):	396 cd	— (35%):	555 cd
— (45%):	713 cd	— (55%):	872 cd

IsoLux Plot



Mounting Height: 10.0m	Max Lux(100%): 15.8 lx
(5%): 0.8 lx	(15%): 2.4 lx
(25%): 3.9 lx	(35%): 5.5 lx
(45%): 7.1 lx	(55%): 8.7 lx
(65%): 10.3 lx	

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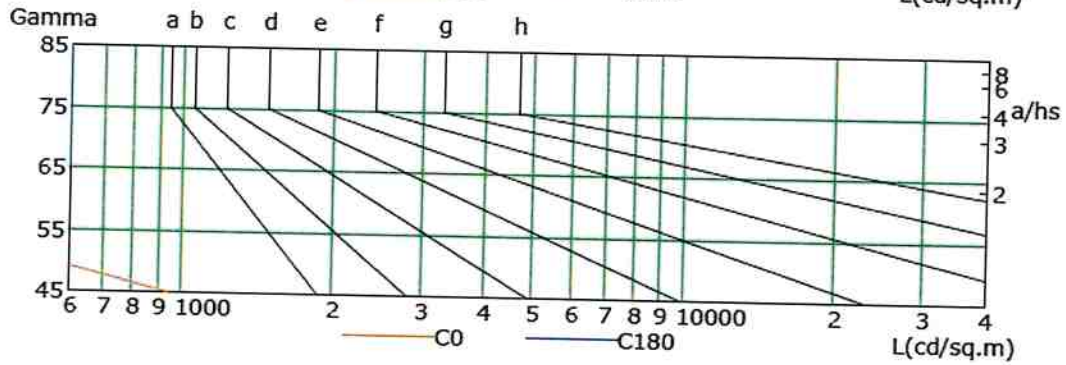
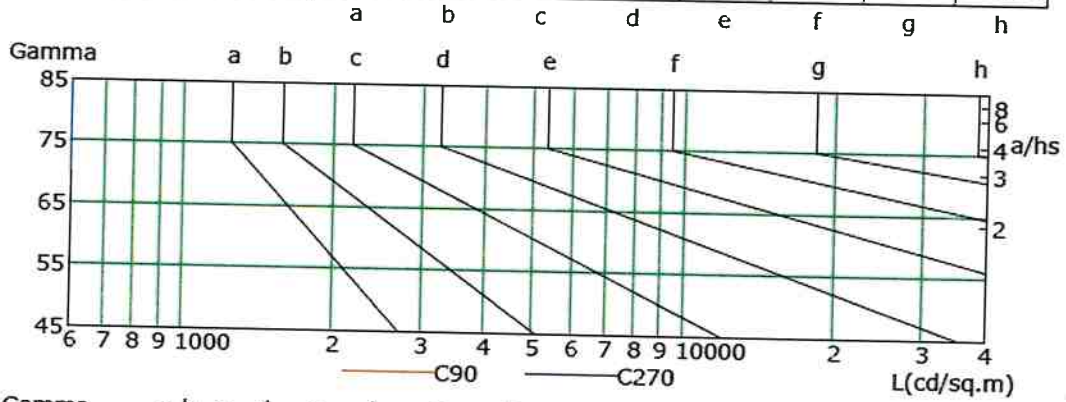
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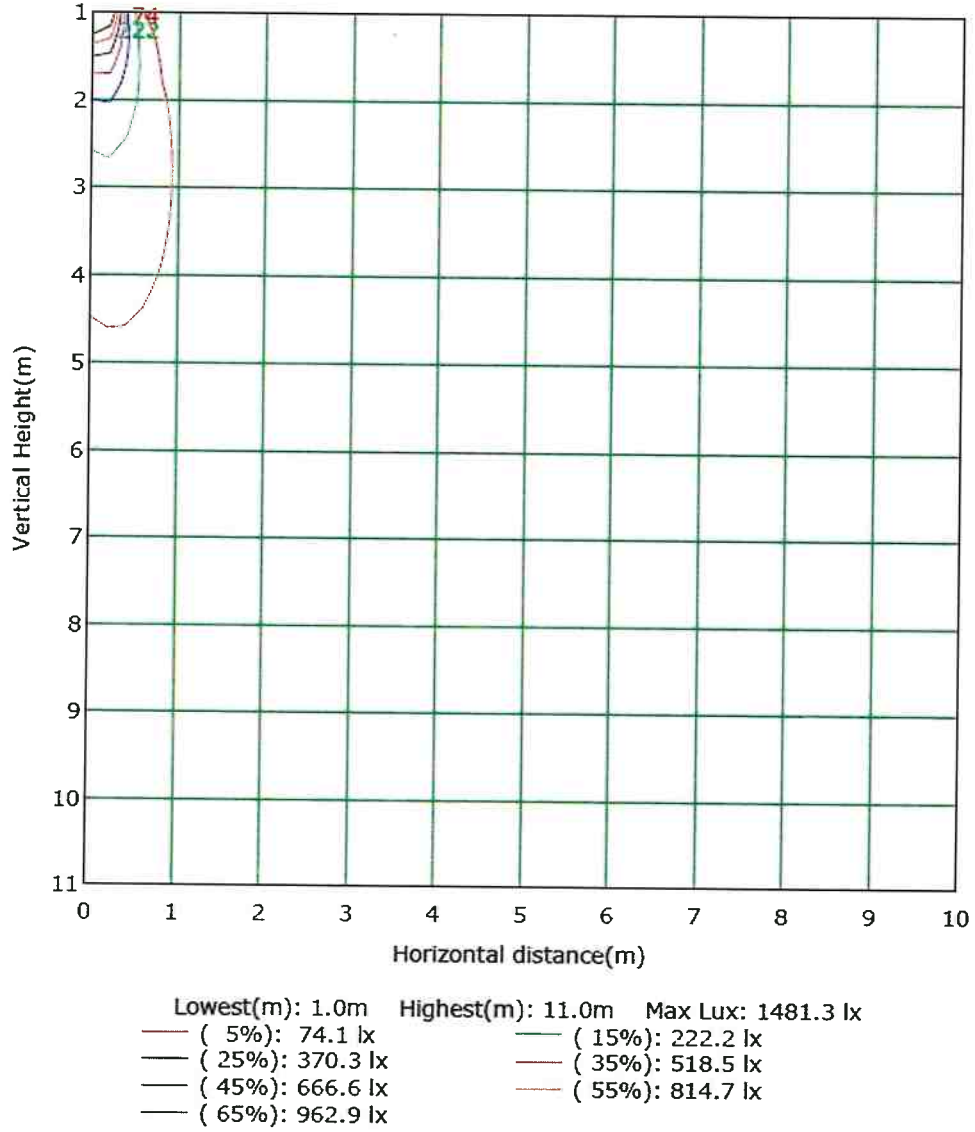
Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		2000	1000	500	<=300				
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	944	548	330	197	68	0	0	0	0
C90	568	362	215	112	24	0	0	0	0
C180	350	181	81	7	0	0	0	0	0
C270	528	332	192	100	28	0	0	0	0

Vertical IsoLux Plot



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UGR Table

Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference 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	14.0	14.8	14.3	15.0	15.2	6.8	7.5	7.0	7.7	7.9
3H	13.9	14.6	14.2	14.8	15.1	6.6	7.3	6.9	7.6	7.8
4H	13.8	14.4	14.1	14.7	15.0	6.6	7.2	6.9	7.5	7.7
6H	13.7	14.3	14.1	14.6	14.9	6.5	7.1	6.8	7.4	7.7
8H	13.7	14.3	14.0	14.6	14.9	6.4	7.0	6.8	7.3	7.6
12H	13.6	14.2	14.0	14.5	14.8	6.4	6.9	6.8	7.3	7.6
X=4H Y=2H	13.8	14.5	14.1	14.7	15.0	6.8	7.4	7.1	7.7	7.9
3H	13.7	14.2	14.0	14.5	14.9	6.6	7.2	7.0	7.5	7.8
4H	13.6	14.1	14.0	14.4	14.8	6.5	7.0	6.9	7.4	7.7
6H	13.5	13.9	13.9	14.3	14.7	6.5	6.9	6.9	7.3	7.7
8H	13.5	13.9	13.9	14.3	14.7	6.4	6.8	6.8	7.2	7.6
12H	13.4	13.8	13.9	14.2	14.6	6.4	6.7	6.8	7.1	7.6
X=8H Y=4H	13.5	13.9	13.9	14.3	14.7	6.4	6.8	6.9	7.2	7.6
6H	13.4	13.7	13.8	14.1	14.6	6.3	6.7	6.8	7.1	7.6
8H	13.3	13.6	13.8	14.1	14.5	6.3	6.6	6.8	7.0	7.5
12H	13.3	13.5	13.8	14.0	14.5	6.2	6.5	6.7	7.0	7.5
X=12H Y=4H	13.4	13.8	13.9	14.2	14.6	6.4	6.7	6.8	7.2	7.6
6H	13.3	13.6	13.8	14.1	14.5	6.3	6.6	6.8	7.0	7.5
8H	13.3	13.5	13.8	14.0	14.5	6.2	6.5	6.7	7.0	7.5
Variations with the observer position at spacings:										
S=1.0H	+3.2/-5.6					+5.2/-7.5				
S=1.5H	+6.3/-8.5					+6.9/-10.8				
S=2.0H	+8.5/-12.2					+8.6/-14.6				

Calculate in accordance with CIE Pub.117. The table is revised with 332lm ($8\log(F/F_0) = -3.8$).

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 0.75								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.90	0.96	0.99	1.02	1.05	1.07	1.09	1.11	1.12
		0.30	0.86	0.92	0.96	0.98	1.02	1.05	1.07	1.09	1.11
		0.20	0.83	0.89	0.93	0.96	1.00	1.03	1.04	1.07	1.09
0.50	0.50	0.20	0.89	0.94	0.97	0.99	1.02	1.04	1.05	1.07	1.08
		0.30	0.85	0.91	0.94	0.97	1.00	1.02	1.04	1.06	1.07
		0.20	0.83	0.88	0.92	0.94	0.98	1.00	1.02	1.04	1.06
0.30	0.50	0.20	0.88	0.92	0.95	0.97	1.00	1.01	1.02	1.04	1.04
		0.30	0.85	0.90	0.93	0.95	0.98	1.00	1.01	1.02	1.03
		0.20	0.82	0.87	0.91	0.93	0.96	0.98	0.99	1.01	1.02
0.00	0.00	0.00	0.81	0.86	0.88	0.90	0.93	0.94	0.95	0.97	0.98

Rating:17W Photometrically tested without ceiling board.
 Multiply UF values by service correction factors
 Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 0.75								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.51	0.41	0.34	0.30	0.23	0.19	0.17	0.13	0.10
	0.30		0.42	0.35	0.30	0.26	0.21	0.18	0.15	0.12	0.10
	0.20		0.36	0.31	0.27	0.24	0.19	0.16	0.14	0.11	0.09
0.50	0.50	0.20	0.48	0.38	0.32	0.27	0.22	0.22	0.15	0.12	0.09
	0.30		0.41	0.33	0.28	0.25	0.20	0.16	0.14	0.11	0.09
	0.20		0.35	0.29	0.25	0.22	0.18	0.15	0.13	0.10	0.09
0.30	0.50	0.20	0.46	0.36	0.30	0.25	0.20	0.16	0.14	0.10	0.08
	0.30		0.39	0.32	0.27	0.23	0.18	0.15	0.13	0.10	0.08
	0.20		0.34	0.28	0.24	0.21	0.17	0.14	0.12	0.09	0.08
0.00	0.00	0.00	0.20	0.15	0.12	0.10	0.08	0.06	0.05	0.04	0.03

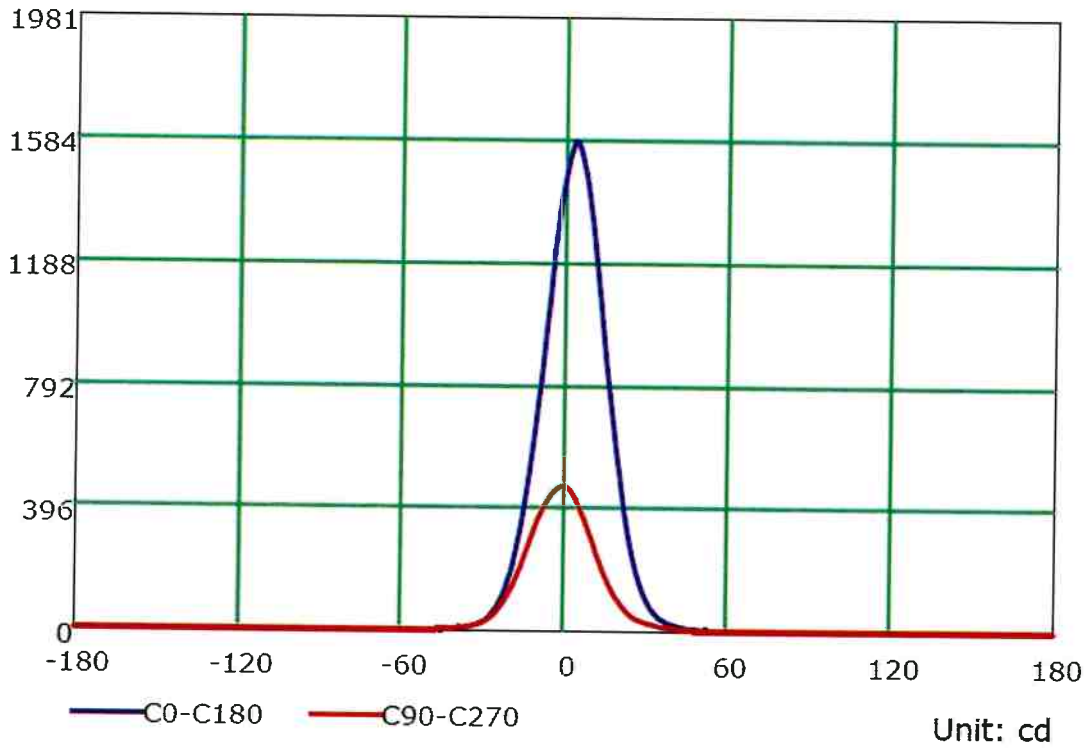
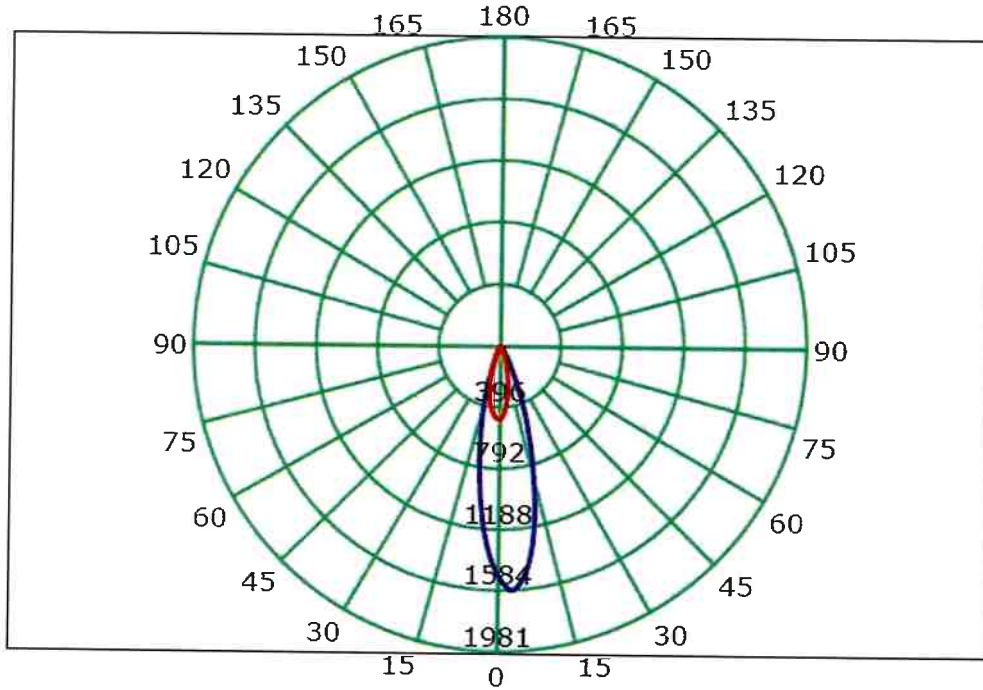
Rating:17W Photometrically tested **without** ceiling board.
 Multiply UF values by service correction factors
 Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 0.75								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.13	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.21
	0.30		0.09	0.11	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.07	0.09	0.11	0.12	0.14	0.15	0.16	0.18	0.19
0.50	0.50	0.20	0.12	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.20
	0.30		0.09	0.11	0.12	0.14	0.15	0.17	0.17	0.19	0.19
	0.20		0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.17	0.18
0.30	0.50	0.20	0.12	0.13	0.15	0.15	0.17	0.18	0.18	0.19	0.20
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.07	0.09	0.10	0.11	0.13	0.15	0.16	0.17	0.18
0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Rating:17W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

Luminous Intensity Distribution Curve



DENEY RAPORU / TEST REPORT

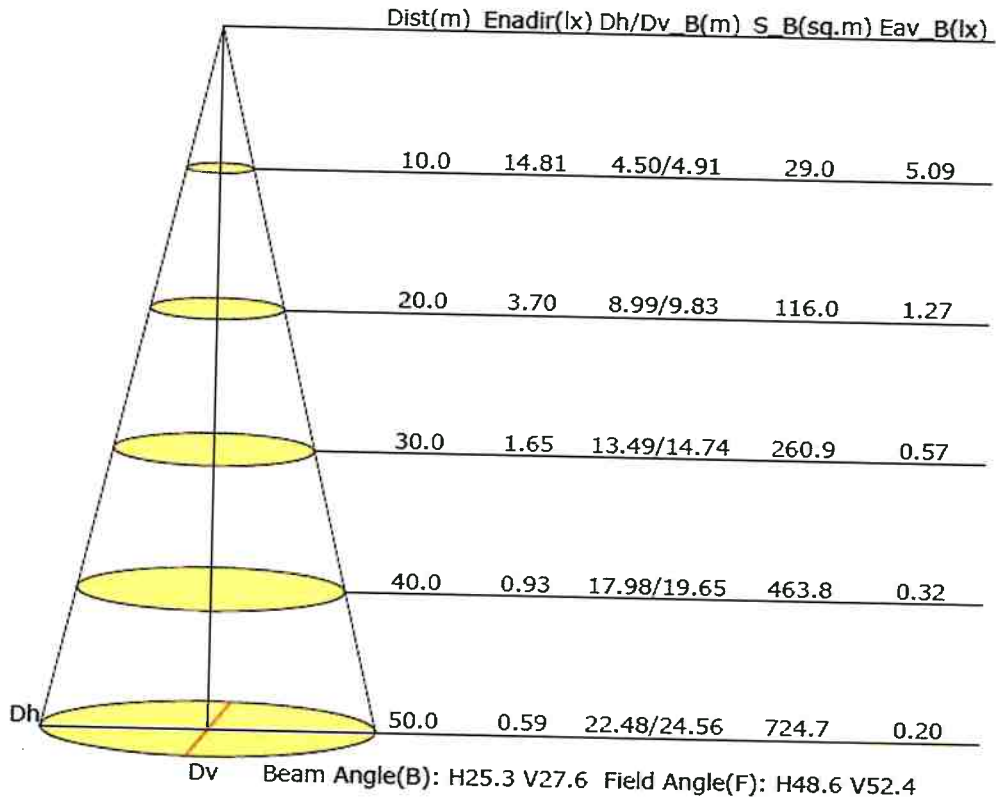
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Illuminance at a Distance



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Görsel Dökümanlar / Photo Documentation



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Deney Rapor No / Test Report No: 171801-864-6

PTC Ürün Test ve Belgelendirme San. Tic. Ltd. Şti.

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