



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:

171801-864-3

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

Procolor DC 60RGBW Floodlight Medium Beam 25° P03002102

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

03.01.2020

Deneyin Yapıldığı Tarih:
Date of test:

03.01.2020

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.



Deneyi Yapan Personel
Person in Performing the Test

Emine Nur ÇİDEM

Laboratuvar Teknik Yöneticisi
Laboratory Technical Manager

Murat ÇİTİL

Bu rapor, Laboratuvarımızın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürsüz raporlar geçersizdir.
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Deney Rapor No / Test Report No: 171801-864-3

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 MEASUREMEMENT 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 60RGBW Floodlight Medium Beam 25° P03002102

Armatürde Ölçülen Toplam Güç / Measured Total Power of Luminaire.....:	40.32 W ;
Armatürün Ölçülen Işık Akısı / Measured Luminous Flux of Luminaire.....:	1537.7 lm (Effective Value)
Armatür verimliliği (lm/Watt) / Luminous efficiency.....:	38.13 lm/Watt
Beam Angle (C0/C180, C90/C270, C45/C225, C135/315):	24.5, 24.4, 24.7, 24.2

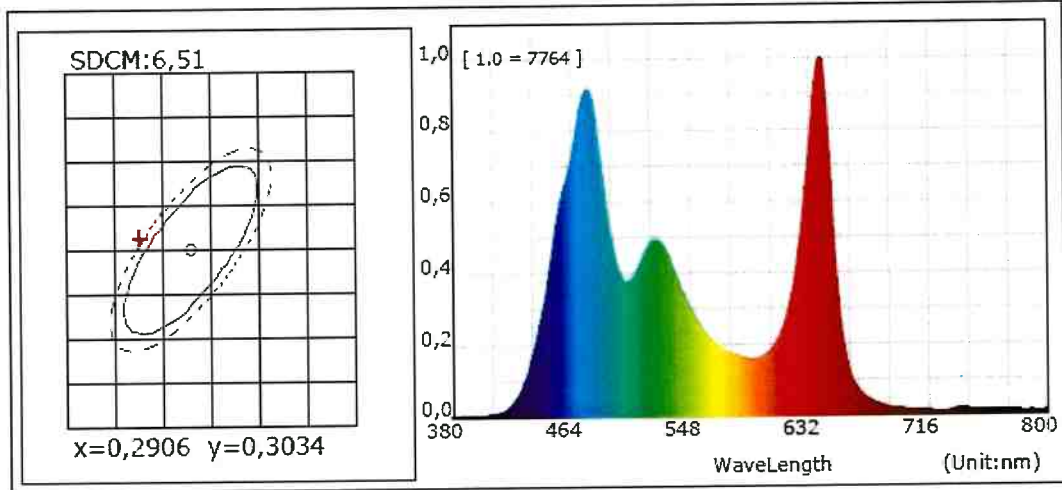
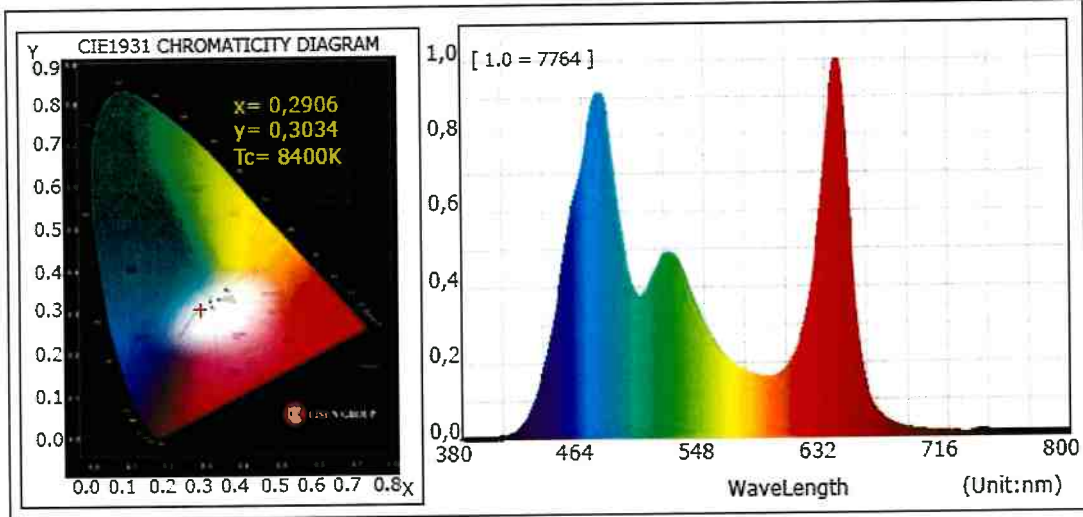
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Date/Time	03.01.2020 16:40
Chromaticity x coord	0,2906
Chromaticity y coord	0,3034
Chromaticity u coord	0,1918
Chromaticity v coord	0,3004
Chromaticity u' coord	0,1918
Chromaticity v' coord	0,4506
Peak Wavelength (nm)	640,1
Half Wavelength (nm)	24,0
Dominant Wavelength (nm)	482,1
Color Purity (%)	17,026
Correlated Color Temperature (deg. K)	8400
SDCM	6,51
Color Rendering Index Average (RA)	58,9
Color Rendering Index (R1)	51
Color Rendering Index (R2)	65
Color Rendering Index (R3)	81
Color Rendering Index (R4)	62
Color Rendering Index (R5)	62
Color Rendering Index (R6)	65
Color Rendering Index (R7)	65
Color Rendering Index (R8)	20
Color Rendering Index (R9)	-129
Color Rendering Index (R10)	24
Color Rendering Index (R11)	65
Color Rendering Index (R12)	60
Color Rendering Index (R13)	52
Color Rendering Index (R14)	88
Color Rendering Index (R15)	35

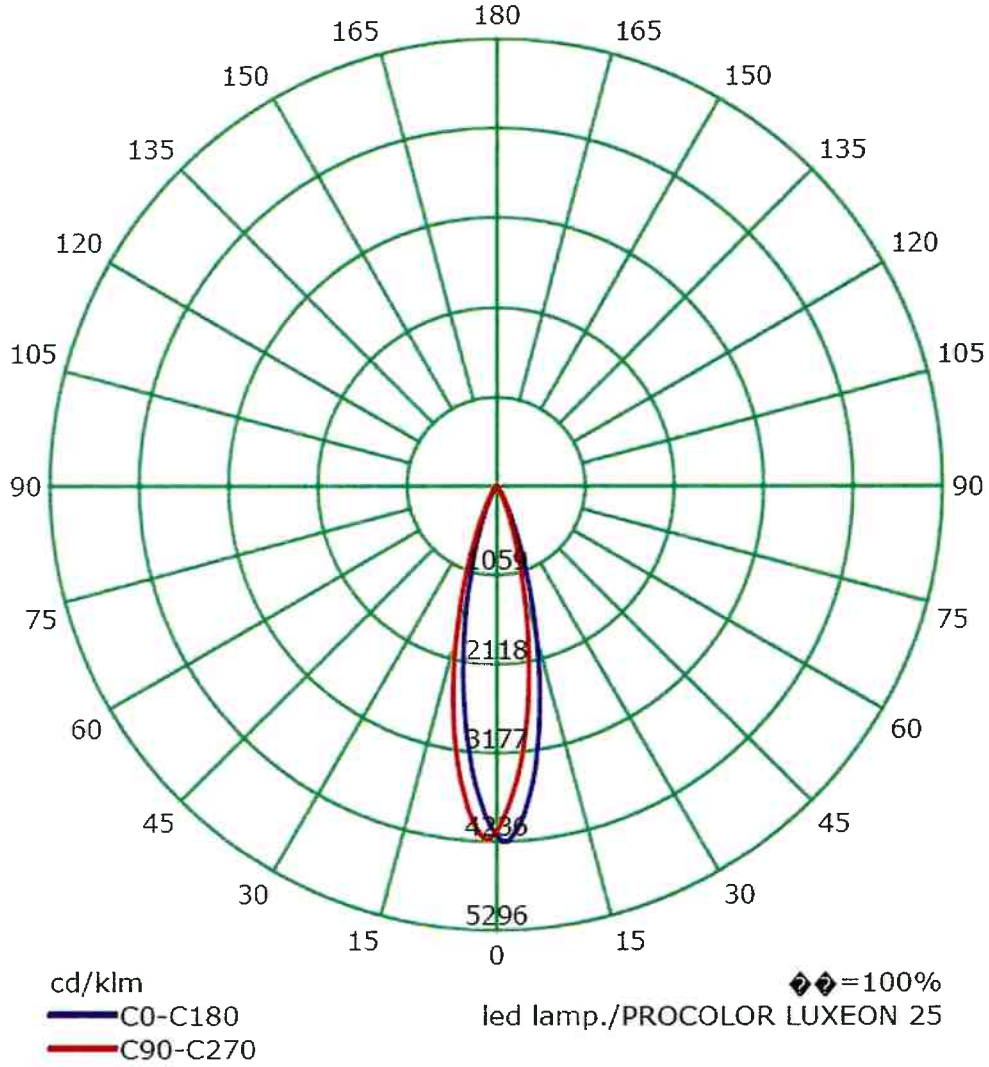
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Luminous Intensity Distribution Curve(cd/klm)



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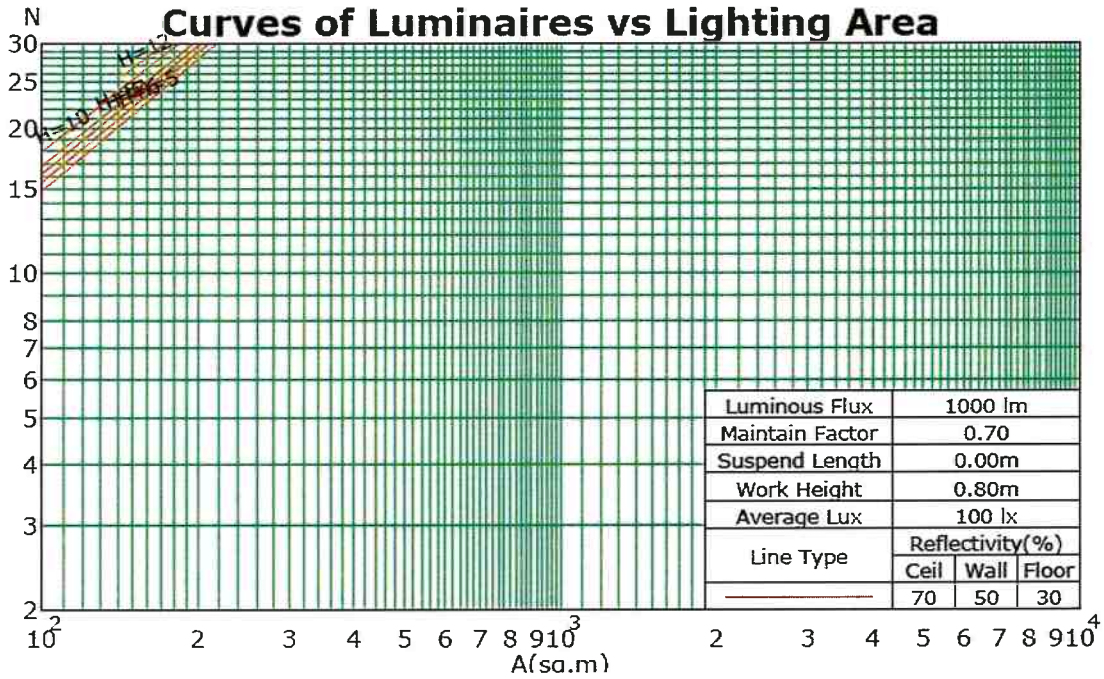
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Coefficients Of Utilization - Zonal Cavity Method

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	102	102	102	100
1	115	113	111	109	112	110	109	107	106	105	104	103	102	101	99	99	98	96
2	111	107	104	101	109	105	102	100	102	100	98	99	97	96	96	95	94	92
3	107	102	98	95	105	101	97	94	98	95	93	96	93	91	94	92	90	89
4	103	97	93	90	102	96	92	89	94	91	88	92	90	87	91	88	86	85
5	100	93	89	86	98	93	88	85	91	87	85	89	86	84	88	85	83	82
6	97	90	85	82	95	89	85	82	88	84	81	87	83	81	85	83	80	79
7	93	87	82	79	92	86	82	79	85	81	78	84	80	78	83	80	78	77
8	91	84	79	76	90	83	79	76	82	78	76	81	78	75	80	77	75	74
9	88	81	76	74	87	80	76	73	80	76	73	79	75	73	78	75	73	72
10	85	78	74	71	85	78	74	71	77	73	71	77	73	71	76	73	71	70

Spacing Criteria (0-180): 0.42
 Spacing Criteria (90-270): 0.42
 Spacing Criteria (Diagonal): 0.44



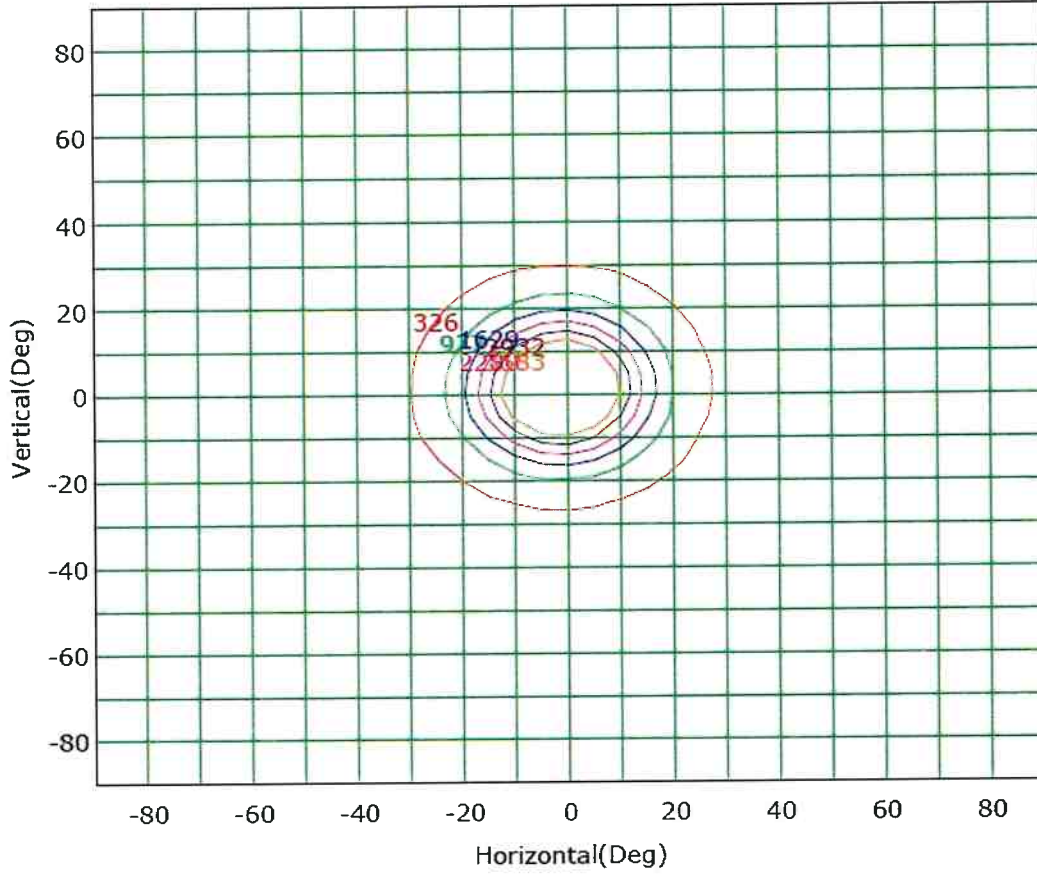
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Isocandela (rectangle)



Imax (100%): 6515 cd

— (5%): 326 cd	— (15%): 977 cd
— (25%): 1629 cd	— (35%): 2280 cd
— (45%): 2932 cd	— (55%): 3583 cd

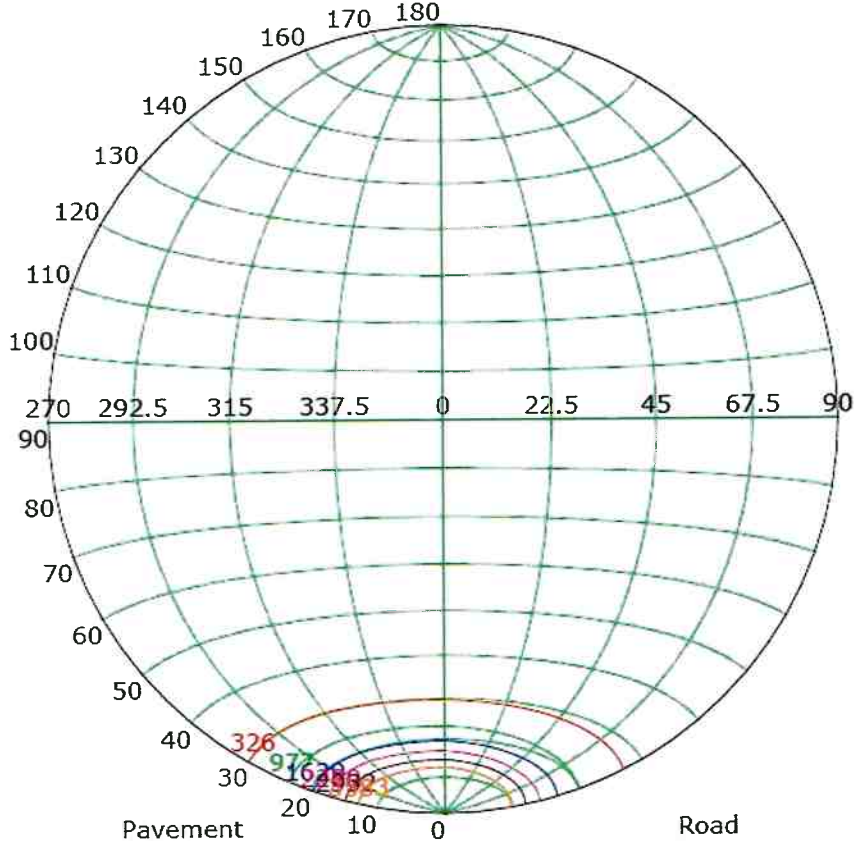
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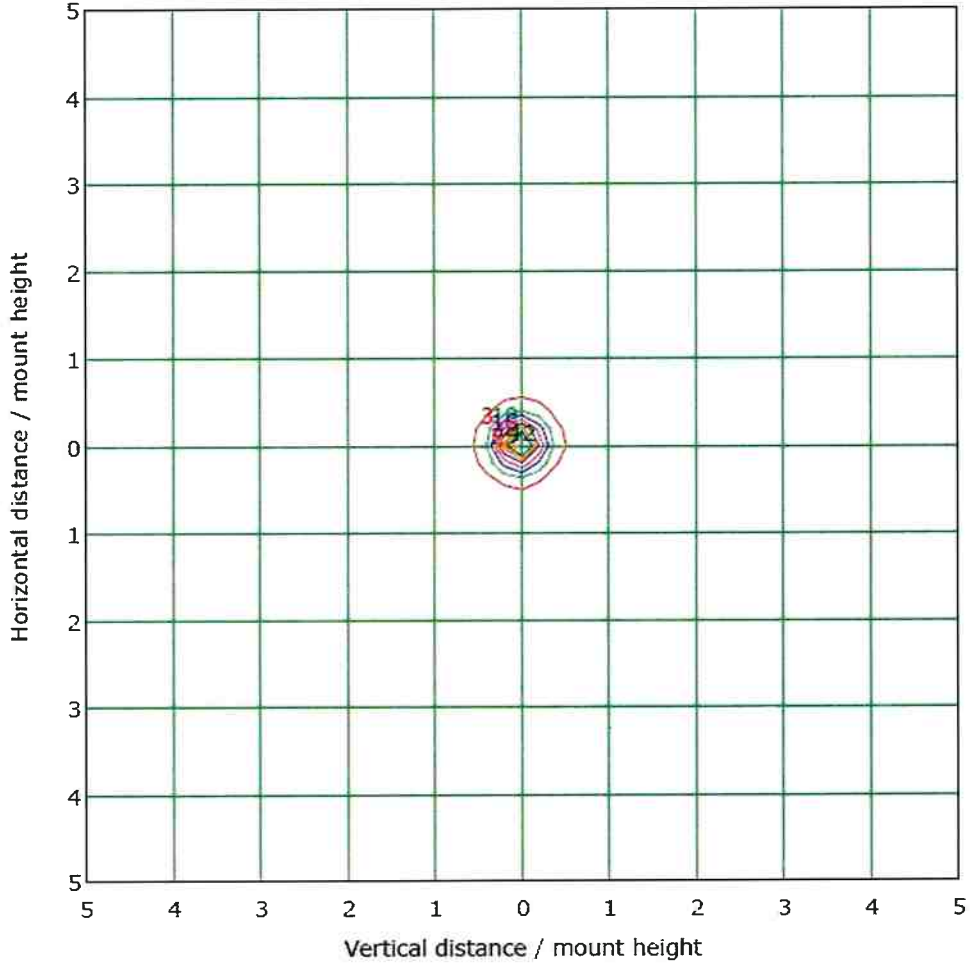
Isocandela (sphere)



Imax (100%): 6515 cd

— (5%): 326 cd	— (15%): 977 cd
— (25%): 1629 cd	— (35%): 2280 cd
— (45%): 2932 cd	— (55%): 3583 cd

IsoLux Plot



Mounting Height: 10.0m	Max Lux(100%): 65.0 lx
(5%): 3.3 lx	(15%): 9.8 lx
(25%): 16.3 lx	(35%): 22.8 lx
(45%): 29.3 lx	(55%): 35.8 lx
(65%): 42.3 lx	

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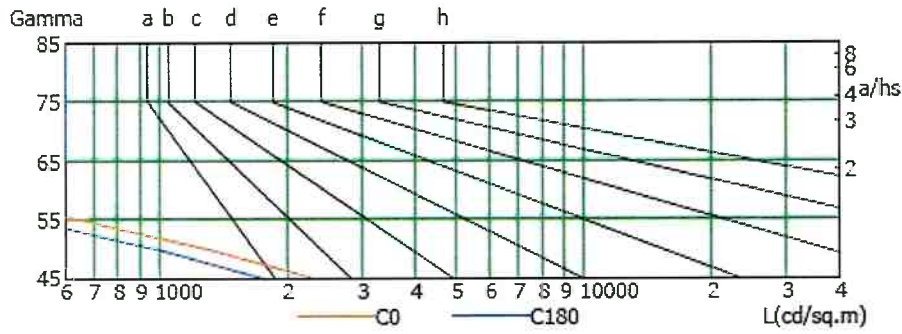
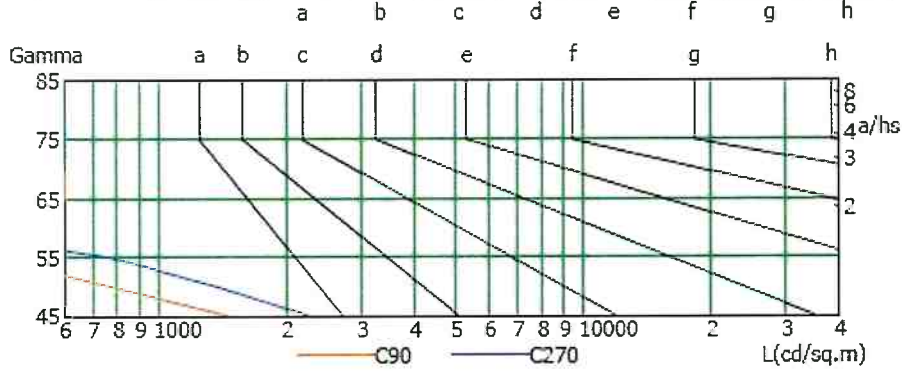
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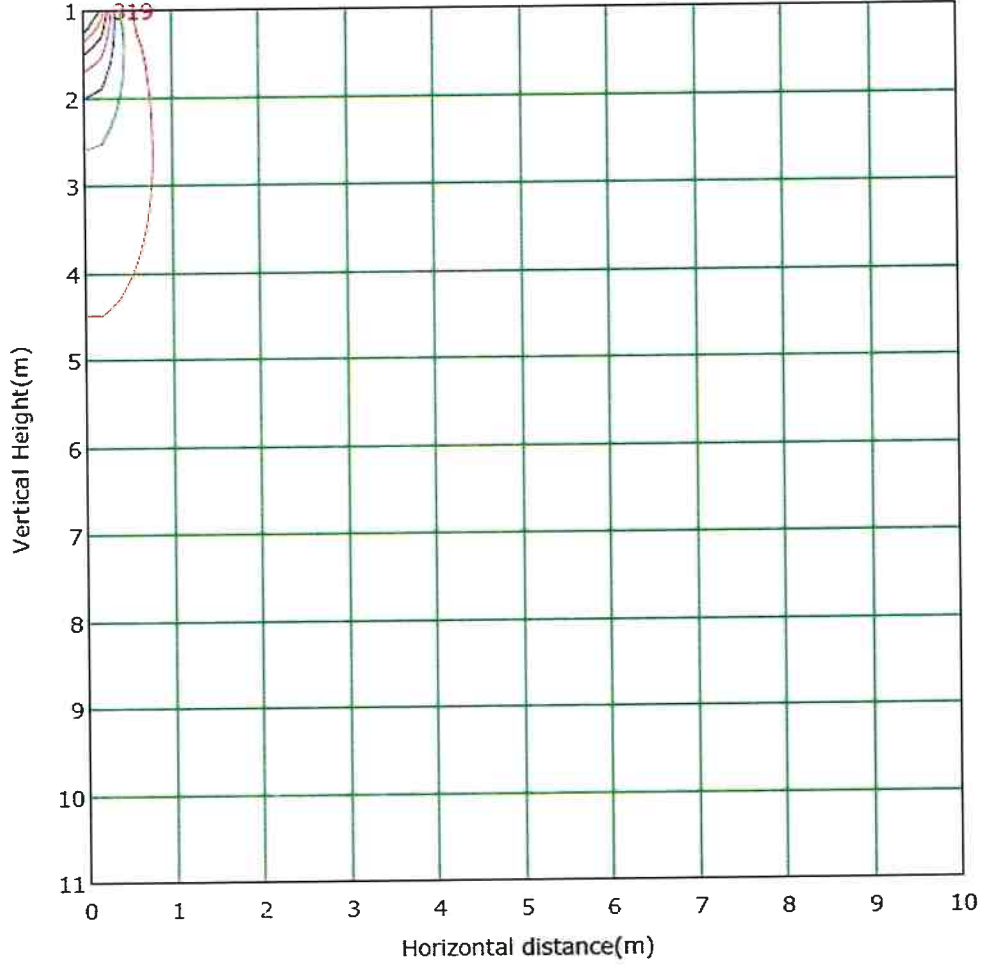
Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		a	b	c	d	e	f	g	h
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	2306	1291	657	193	0	0	0	0	0
C90	1467	767	403	78	0	0	0	0	0
C180	1738	979	486	92	0	0	0	0	0
C270	2264	1372	768	282	87	0	0	0	0

Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 6386.5 lx
— (5%): 319.3 lx — (15%): 958.0 lx
— (25%): 1596.6 lx — (35%): 2235.3 lx
— (45%): 2873.9 lx — (55%): 3512.6 lx
— (65%): 4151.3 lx

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	6.6	7.3	6.9	7.5	7.7	6.1	6.7	6.3	6.9	7.1
3H	6.5	7.1	6.8	7.3	7.5	5.9	6.5	6.2	6.8	7.0
4H	6.4	7.0	6.7	7.2	7.5	5.9	6.4	6.2	6.7	6.9
6H	6.3	6.9	6.7	7.1	7.4	5.8	6.3	6.1	6.6	6.9
8H	6.3	6.8	6.6	7.1	7.4	5.8	6.3	6.1	6.5	6.8
12H	6.3	6.7	6.6	7.0	7.4	5.7	6.2	6.1	6.5	6.8
X=4H Y=2H	6.5	7.0	6.8	7.3	7.5	5.9	6.5	6.2	6.7	7.0
3H	6.3	6.8	6.6	7.1	7.4	5.8	6.2	6.1	6.5	6.9
4H	6.2	6.6	6.6	7.0	7.3	5.7	6.1	6.0	6.4	6.8
6H	6.1	6.5	6.5	6.9	7.3	5.6	6.0	6.0	6.3	6.7
8H	6.1	6.4	6.5	6.8	7.2	5.5	5.9	6.0	6.3	6.7
12H	6.0	6.3	6.5	6.7	7.2	5.5	5.8	5.9	6.2	6.6
X=8H Y=4H	6.1	6.4	6.5	6.8	7.2	5.5	5.9	6.0	6.3	6.7
6H	6.0	6.3	6.4	6.7	7.1	5.4	5.7	5.9	6.1	6.6
8H	5.9	6.2	6.4	6.6	7.1	5.4	5.6	5.9	6.1	6.6
12H	5.9	6.1	6.4	6.6	7.1	5.3	5.6	5.8	6.0	6.5
X=12H Y=4H	6.0	6.3	6.5	6.7	7.2	5.5	5.8	5.9	6.2	6.6
6H	5.9	6.2	6.4	6.6	7.1	5.4	5.6	5.9	6.1	6.6
8H	5.9	6.1	6.4	6.6	7.1	5.3	5.6	5.8	6.0	6.5
Variations with the observer position at spacings:										
S=1.0H	+4.3/-6.8					+4.4/-6.9				
S=1.5H	+7.2/-18.6					+6.9/-16.9				
S=2.0H	+9.2/-1.5					+8.9/-1.5				

Calculate in accordance with CIE Pub.117. The table is revised with 1538lm ($\log(F/F_0) = 1.5$).

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Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 0.50								
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	0.93	0.99	1.02	1.04	1.08	1.10	1.11	1.13	1.15
		0.30	0.89	0.95	0.98	1.01	1.05	1.07	1.09	1.11	1.13
		0.20	0.86	0.92	0.96	0.99	1.02	1.05	1.07	1.10	1.11
0.50	0.50	0.20	0.92	0.97	1.00	1.02	1.05	1.07	1.08	1.10	1.11
		0.30	0.89	0.94	0.97	0.99	1.03	1.05	1.06	1.08	1.09
		0.20	0.86	0.91	0.95	0.97	1.01	1.03	1.04	1.07	1.08
0.30	0.50	0.20	0.91	0.95	0.98	1.00	1.02	1.04	1.05	1.06	1.07
		0.30	0.88	0.93	0.96	0.98	1.00	1.02	1.03	1.05	1.06
		0.20	0.86	0.90	0.94	0.96	0.99	1.01	1.02	1.04	1.05
0.00	0.00	0.00	0.84	0.89	0.91	0.93	0.96	0.97	0.98	0.99	1.00

Rating:50W 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 = 0.50								
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	0.50	0.40	0.34	0.29	0.23	0.19	0.16	0.13	0.10
		0.30	0.42	0.34	0.29	0.26	0.21	0.18	0.15	0.12	0.10
		0.20	0.36	0.30	0.26	0.23	0.19	0.16	0.14	0.11	0.09
0.50	0.50	0.20	0.47	0.38	0.31	0.27	0.21	0.22	0.15	0.11	0.09
		0.30	0.40	0.33	0.28	0.24	0.19	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	0.08
0.30	0.50	0.20	0.45	0.35	0.29	0.25	0.19	0.16	0.13	0.10	0.08
		0.30	0.38	0.31	0.26	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	0.19	0.15	0.12	0.10	0.07	0.06	0.05	0.04	0.03

Rating:50W 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 = 0.50									
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	0.12	0.14	0.15	0.16	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	0.10	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	0.13	0.15	0.16	0.17	0.18	0.19	
		0.20	0.06	0.08	0.10	0.11	0.13	0.15	0.16	0.17	0.18	
0.30	0.50	0.20	0.12	0.13	0.14	0.15	0.17	0.17	0.18	0.19	0.19	
		0.30	0.09	0.10	0.12	0.13	0.15	0.16	0.17	0.18	0.19	
		0.20	0.06	0.08	0.10	0.11	0.13	0.15	0.16	0.17	0.18	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Rating:50W Photometrically tested without ceiling board.
 Multiply UF values by service correction factors
 Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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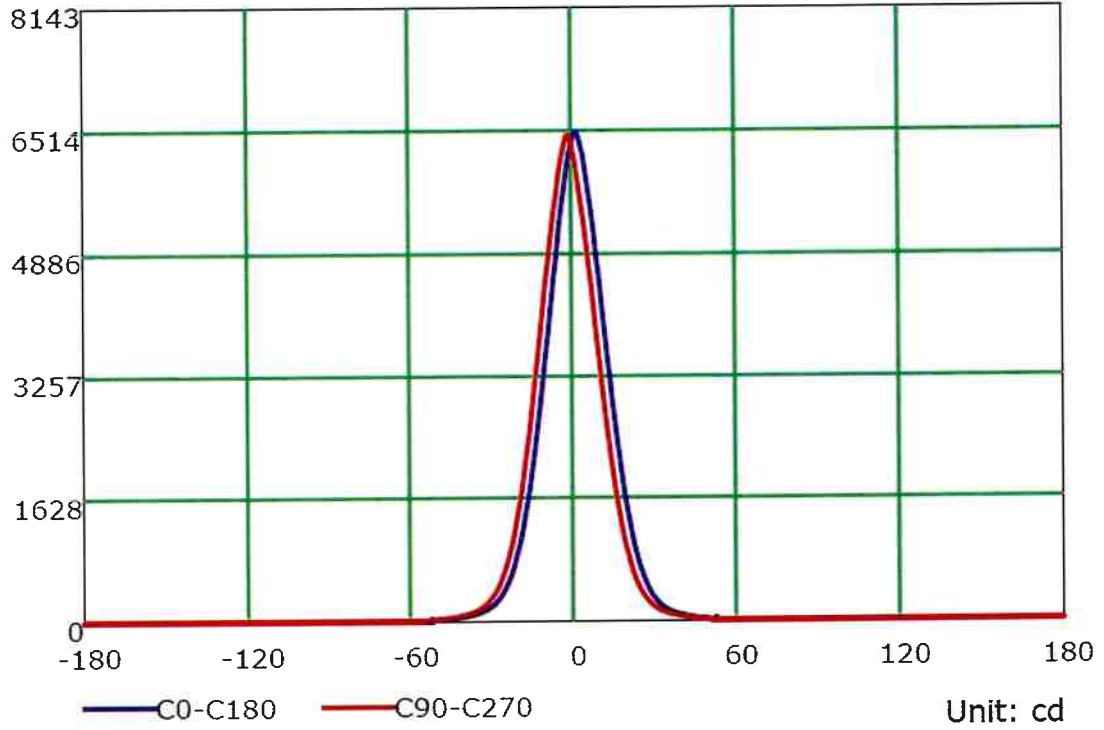
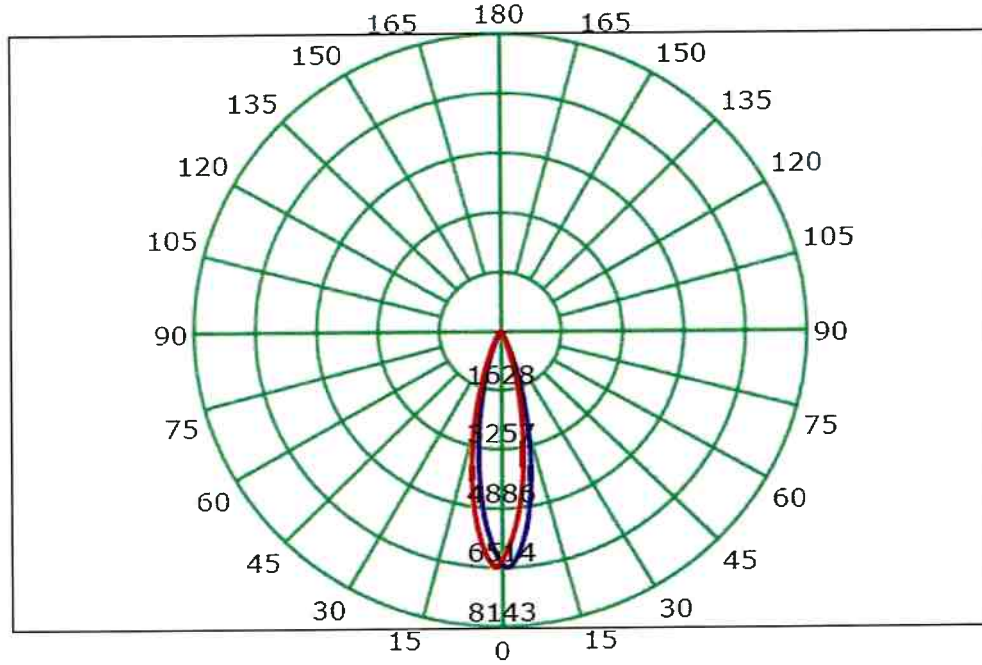
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Luminous Intensity Distribution Curve



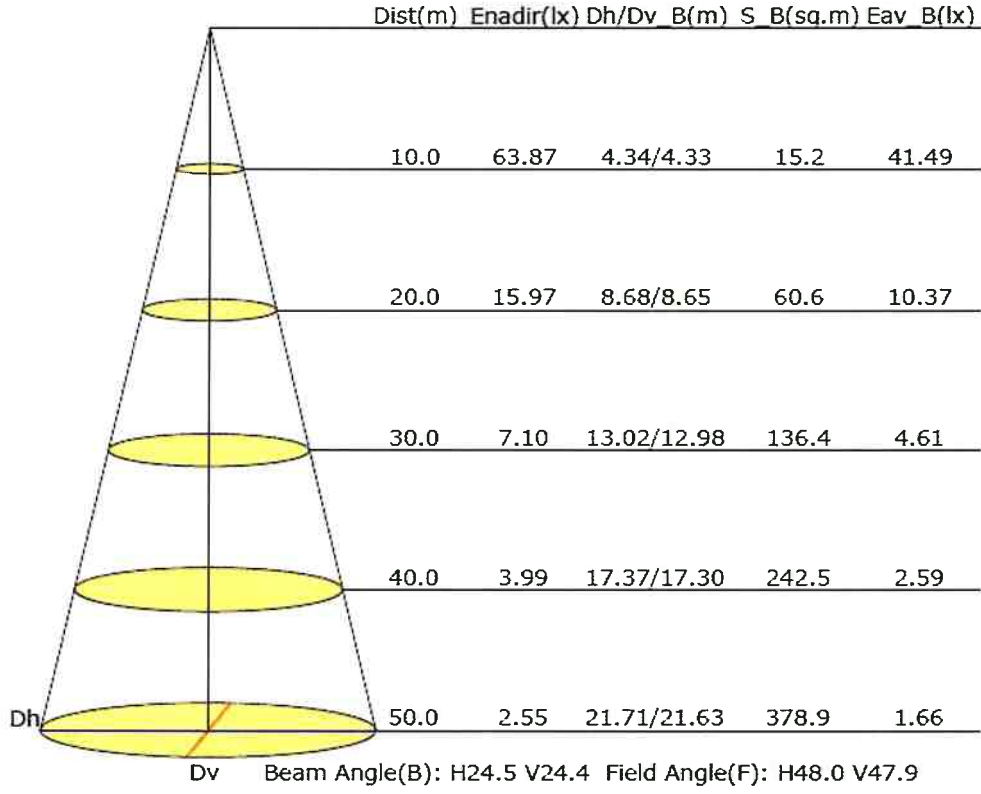
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Illuminance at a Distance



Görsel Dökümanlar / Photo Documentation



DENEY RAPORU / TEST REPORT

Deney Rapor No / Test Report No: 171801-864-3

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

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