



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:

171801-864-4

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

Procolor DC 60RGBW Floodlight Wide Beam 35° P03002103

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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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 60RGBW Floodlight Wide Beam 35° P03002103

Armatürde Ölçülen Toplam Güç / Measured Total Power of Luminaire.....:	40.32 W ;
Armatürün Ölçülen Işık Akısı / Measured Luminous Flux of Luminaire.....:	1507.1 lm (Effective Value)
Armatür verimliliği (lm/Watt) / Luminous efficiency.....:	37.38 lm/Watt
Beam Angle (C0/C180, C90/C270, C45/C225, C135/315):	33.3, 32.8, 33.2, 32.9

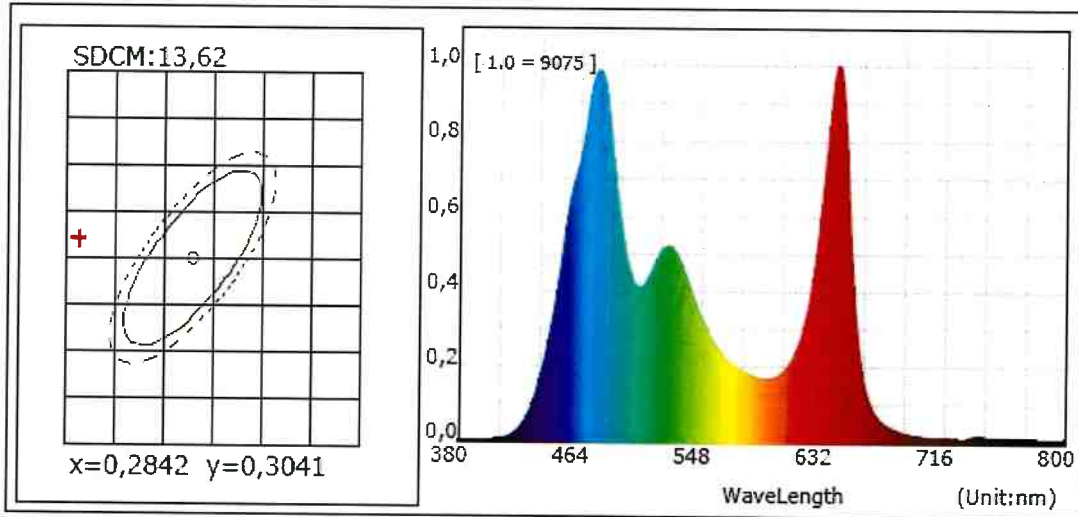
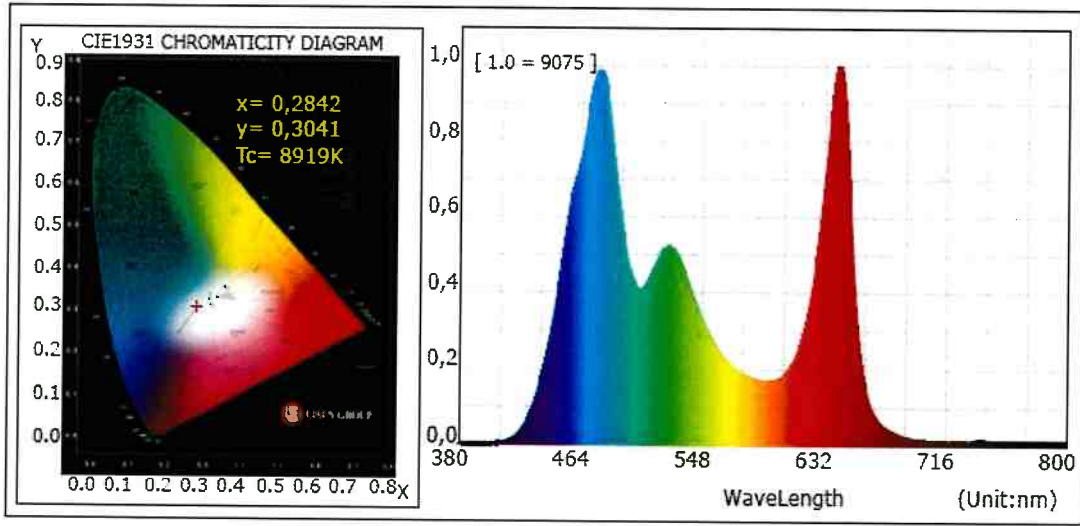
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Date/Time	03.01.2020 17:40
Chromaticity x coord	0,2842
Chromaticity y coord	0,3041
Chromaticity u coord	0,1869
Chromaticity v coord	0,3001
Chromaticity u' coord	0,1869
Chromaticity v' coord	0,4501
Peak Wavelength (nm)	641,6
Half Wavelength (nm)	24,0
Dominant Wavelength (nm)	483,6
Color Purity (%)	19,028
Correlated Color Temperature (deg. K)	8919
SDCM	13,62
Color Rendering Index Average (RA)	62,1
Color Rendering Index (R1)	57
Color Rendering Index (R2)	67
Color Rendering Index (R3)	80
Color Rendering Index (R4)	65
Color Rendering Index (R5)	68
Color Rendering Index (R6)	68
Color Rendering Index (R7)	65
Color Rendering Index (R8)	27
Color Rendering Index (R9)	-116
Color Rendering Index (R10)	27
Color Rendering Index (R11)	73
Color Rendering Index (R12)	64
Color Rendering Index (R13)	56
Color Rendering Index (R14)	88
Color Rendering Index (R15)	41

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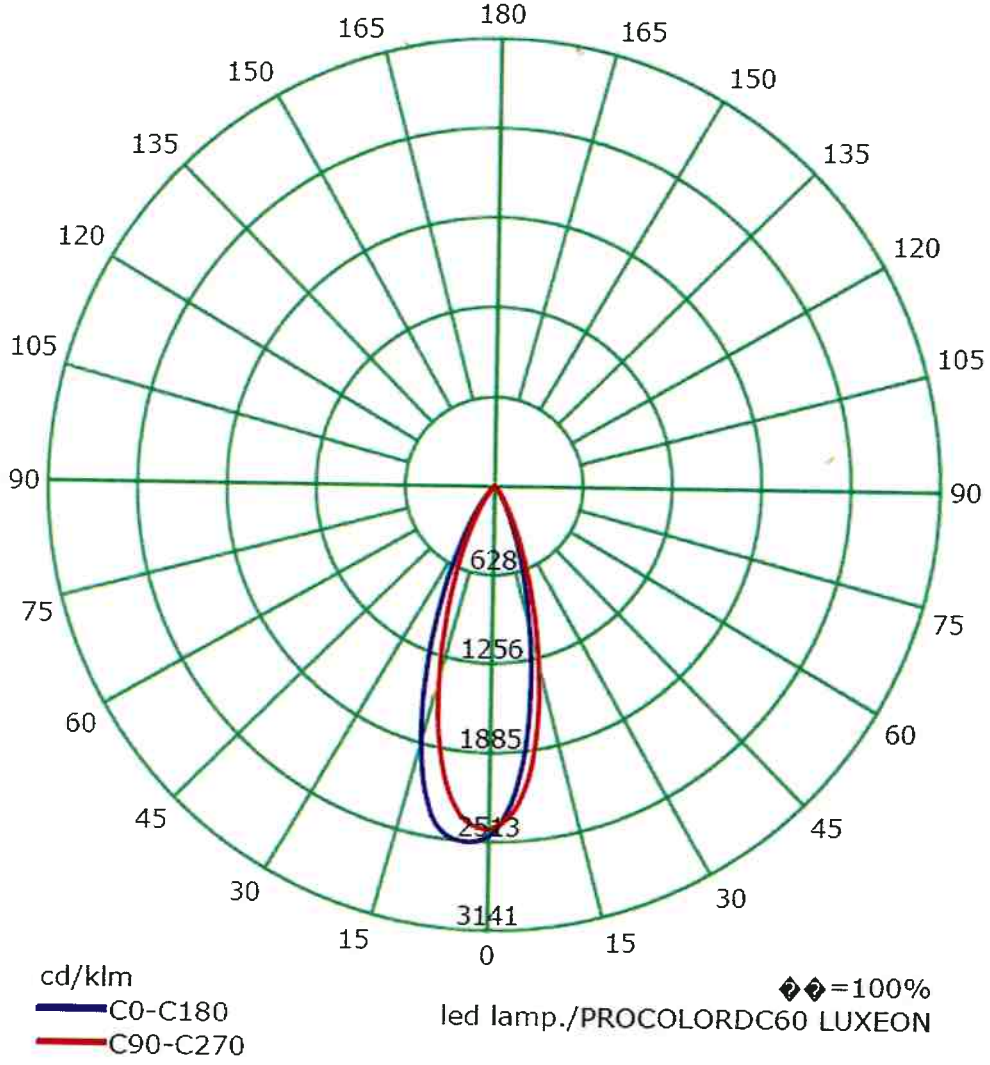
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Luminous Intensity Distribution Curve(cd/klm)



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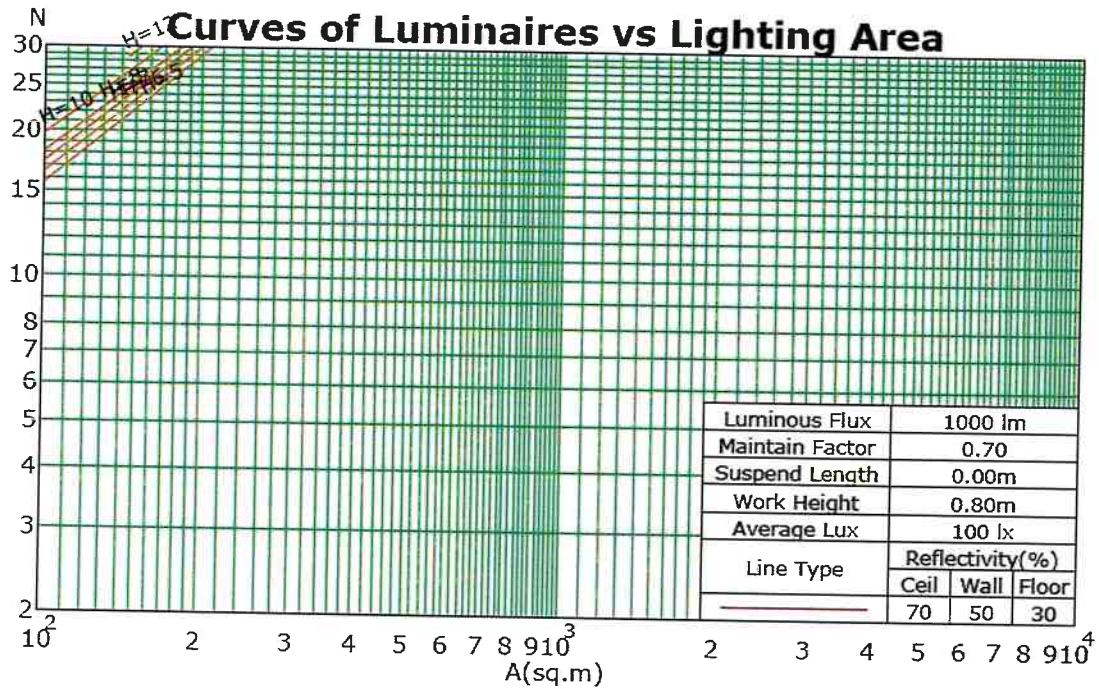
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Coefficients Of Utilization - Zonal Cavity Method

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	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	105	99	95	91	103	98	94	90	95	92	89	92	90	87	90	88	86	84
4	100	94	89	85	98	93	88	85	90	87	84	88	85	83	86	84	82	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	76	82	78	75	81	77	74	80	76	74	73
7	89	81	76	72	87	80	75	72	79	75	71	78	74	71	77	73	71	69
8	85	77	72	69	84	77	72	68	76	71	68	75	71	68	74	70	67	66
9	82	74	69	66	81	74	69	65	73	68	65	72	68	65	71	67	65	64
10	79	71	66	63	78	71	66	63	70	65	62	69	65	62	68	65	62	61

Spacing Criteria (0-180): 0.56
Spacing Criteria (90-270): 0.54
Spacing Criteria (Diagonal): 0.56



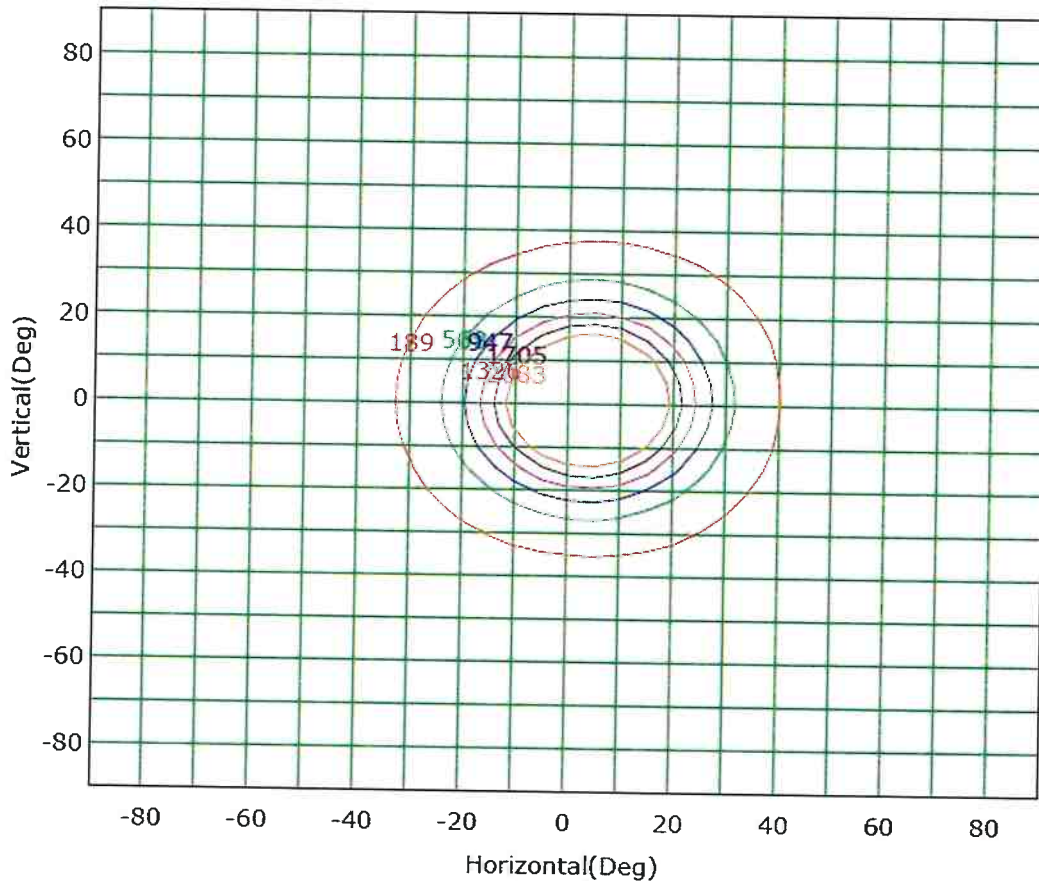
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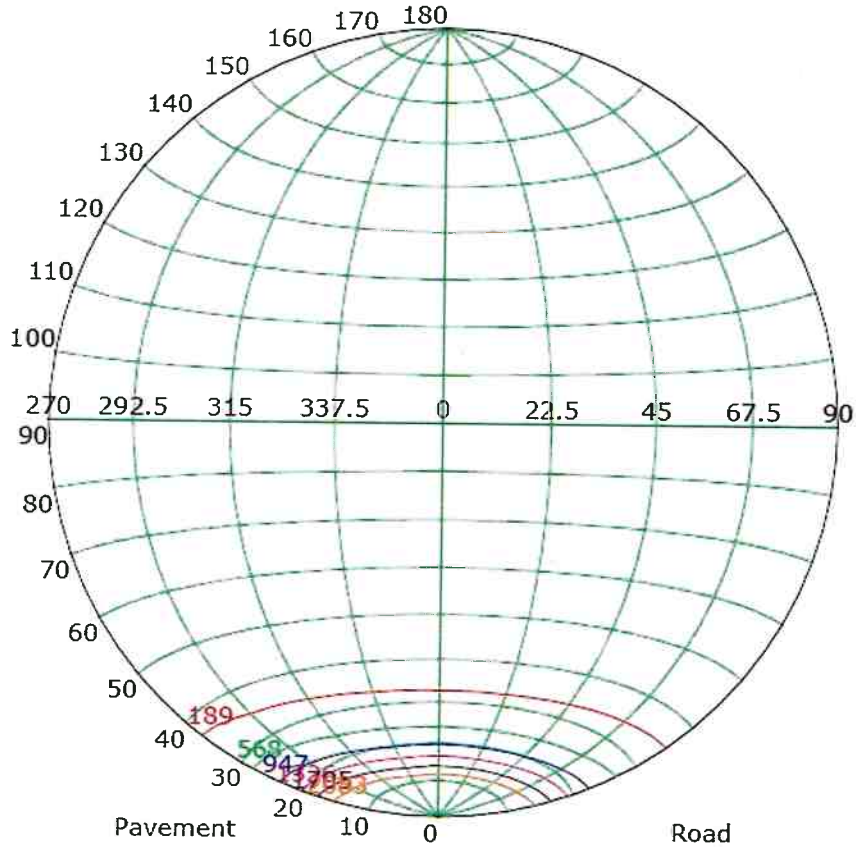
Isocandela (rectangle)



Imax (100%): 3788 cd

— (5%): 189 cd	— (15%): 568 cd
— (25%): 947 cd	— (35%): 1326 cd
— (45%): 1705 cd	— (55%): 2083 cd

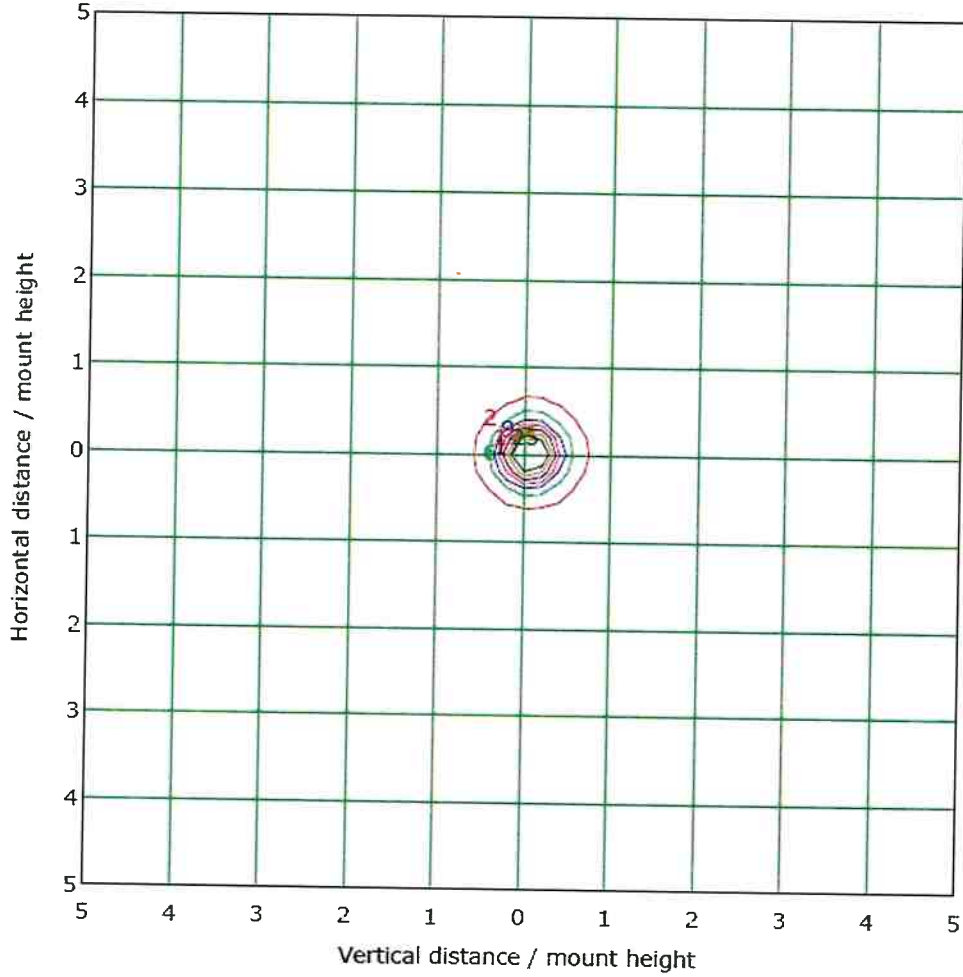
Isocandela (sphere)



Imax (100%): 3788 cd

— (5%): 189 cd	— (15%): 568 cd
— (25%): 947 cd	— (35%): 1326 cd
— (45%): 1705 cd	— (55%): 2083 cd

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 37.7 lx

— (5%): 1.9 lx	— (15%): 5.7 lx
— (25%): 9.4 lx	— (35%): 13.2 lx
— (45%): 17.0 lx	— (55%): 20.7 lx
— (65%): 24.5 lx	

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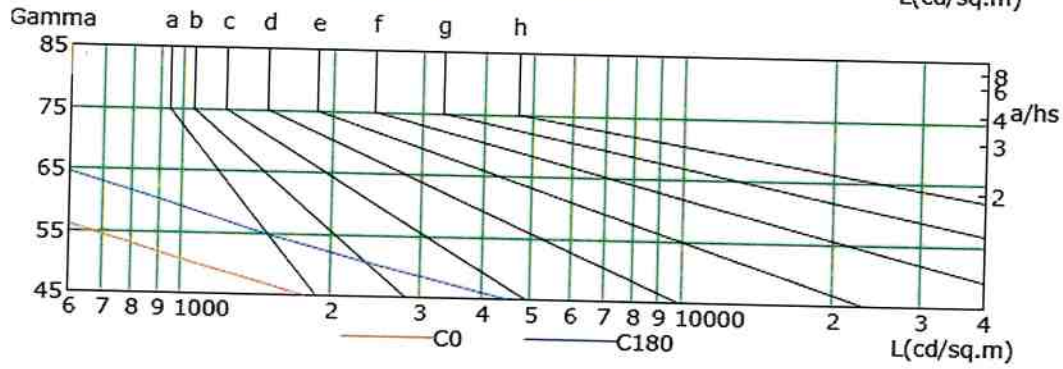
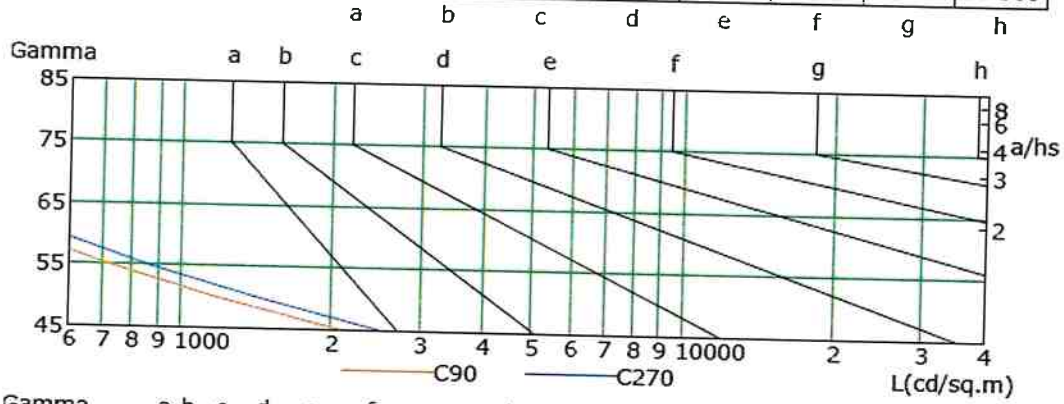
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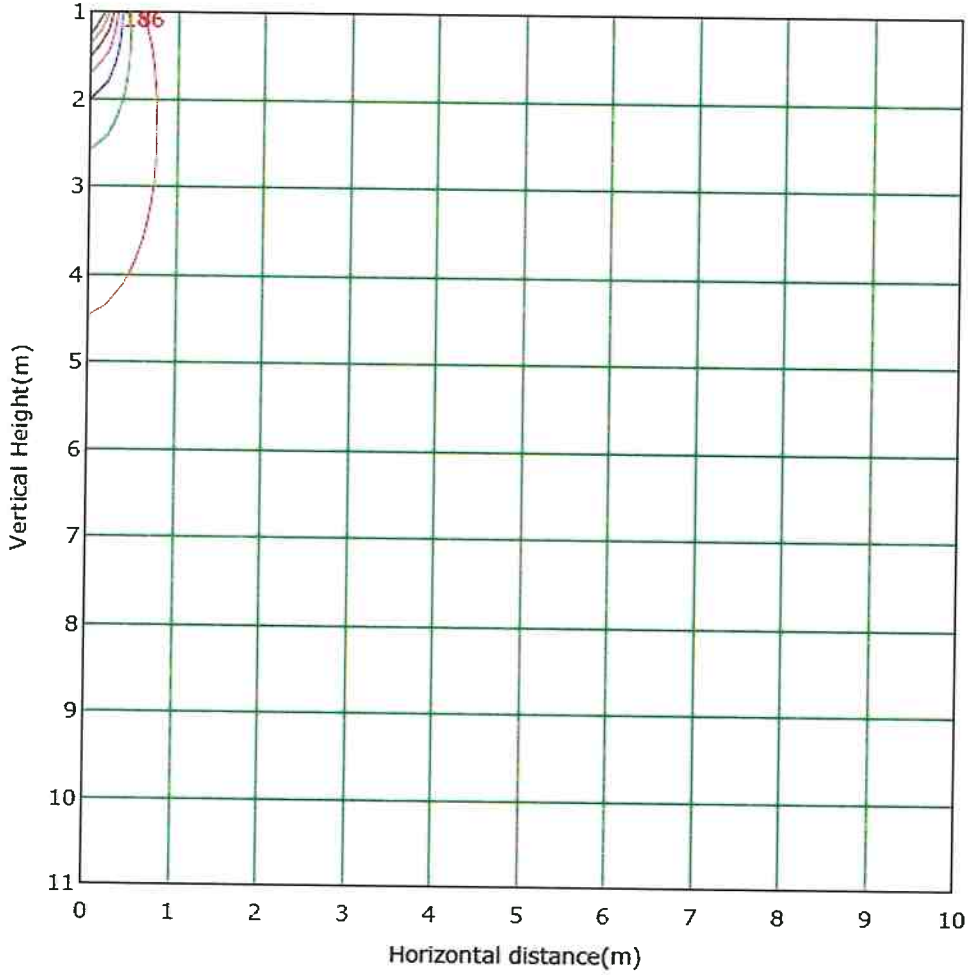
Lum Limit Curve

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	1775	1063	664	406	202	87	15	0	0
C90	2084	1165	719	471	293	143	59	6	0
C180	4500	2501	1464	931	574	325	166	44	0
C270	2493	1414	856	561	365	188	79	18	0

Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 3722.9 lx
— (5%): 186.1 lx — (15%): 558.4 lx
— (25%): 930.7 lx — (35%): 1303.0 lx
— (45%): 1675.3 lx — (55%): 2047.6 lx
— (65%): 2419.9 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	6.0	6.7	6.2	6.9	7.1	7.6	8.4	7.9	8.6	8.8
3H	5.9	6.5	6.2	6.8	7.0	7.6	8.2	7.9	8.5	8.7
4H	5.8	6.4	6.1	6.7	7.0	7.5	8.1	7.8	8.4	8.7
6H	5.7	6.3	6.1	6.6	6.9	7.4	8.0	7.8	8.3	8.6
8H	5.7	6.2	6.0	6.6	6.9	7.4	7.9	7.7	8.2	8.6
12H	5.6	6.2	6.0	6.5	6.8	7.3	7.9	7.7	8.2	8.5
X=4H Y=2H	5.8	6.5	6.2	6.7	7.0	7.5	8.1	7.8	8.4	8.6
3H	5.7	6.3	6.1	6.6	6.9	7.4	7.9	7.7	8.2	8.6
4H	5.7	6.1	6.0	6.5	6.9	7.3	7.8	7.7	8.1	8.5
6H	5.6	6.0	6.0	6.4	6.8	7.2	7.7	7.6	8.0	8.4
8H	5.5	5.9	6.0	6.3	6.7	7.2	7.6	7.6	8.0	8.4
12H	5.5	5.8	5.9	6.2	6.7	7.1	7.5	7.6	7.9	8.3
X=8H Y=4H	5.5	5.9	6.0	6.3	6.7	7.2	7.6	7.6	8.0	8.4
6H	5.4	5.7	5.9	6.2	6.7	7.1	7.4	7.6	7.8	8.3
8H	5.4	5.7	5.9	6.1	6.6	7.0	7.3	7.5	7.8	8.3
12H	5.3	5.6	5.8	6.1	6.6	7.0	7.2	7.5	7.7	8.2
X=12H Y=4H	5.5	5.8	5.9	6.3	6.7	7.1	7.5	7.6	7.9	8.4
6H	5.4	5.7	5.9	6.1	6.6	7.0	7.3	7.5	7.8	8.3
8H	5.3	5.6	5.8	6.1	6.6	7.0	7.2	7.5	7.7	8.2
Variations with the observer position at spacings:										
S=1.0H	+4.2/-5.3					+4.7/-5.9				
S=1.5H	+6.9/-8.3					+7.3/-8.5				
S=2.0H	+8.9/-12.2					+9.3/-11.8				

Calculate in accordance with CIE Pub.117. The table is revised with 1507lm ($8\log(F/F_0) = 1.4$).

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	0.91	0.96	1.00	1.02	1.06	1.08	1.09	1.11	1.12
		0.30	0.87	0.93	0.96	0.99	1.03	1.05	1.07	1.09	1.11
		0.20	0.84	0.90	0.93	0.96	1.00	1.03	1.05	1.07	1.09
0.50	0.50	0.20	0.90	0.95	0.98	1.00	1.03	1.04	1.06	1.07	1.08
		0.30	0.86	0.91	0.95	0.97	1.00	1.02	1.04	1.06	1.07
		0.20	0.84	0.89	0.92	0.95	0.98	1.01	1.02	1.04	1.06
0.30	0.50	0.20	0.89	0.93	0.96	0.98	1.00	1.01	1.02	1.04	1.04
		0.30	0.86	0.90	0.93	0.95	0.98	1.00	1.01	1.02	1.03
		0.20	0.83	0.88	0.91	0.93	0.96	0.98	1.00	1.01	1.02
0.00	0.00	0.00	0.82	0.86	0.89	0.91	0.93	0.95	0.96	0.97	0.98

Rating:49W 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	0.50	0.40	0.34	0.29	0.23	0.19	0.16	0.13	0.10
		0.30	0.41	0.34	0.30	0.26	0.21	0.18	0.15	0.12	0.10
		0.20	0.35	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	0.32	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	0.34	0.29	0.25	0.22	0.18	0.15	0.13	0.10	0.09
0.30	0.50	0.20	0.44	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	0.33	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	0.08	0.06	0.05	0.04	0.03

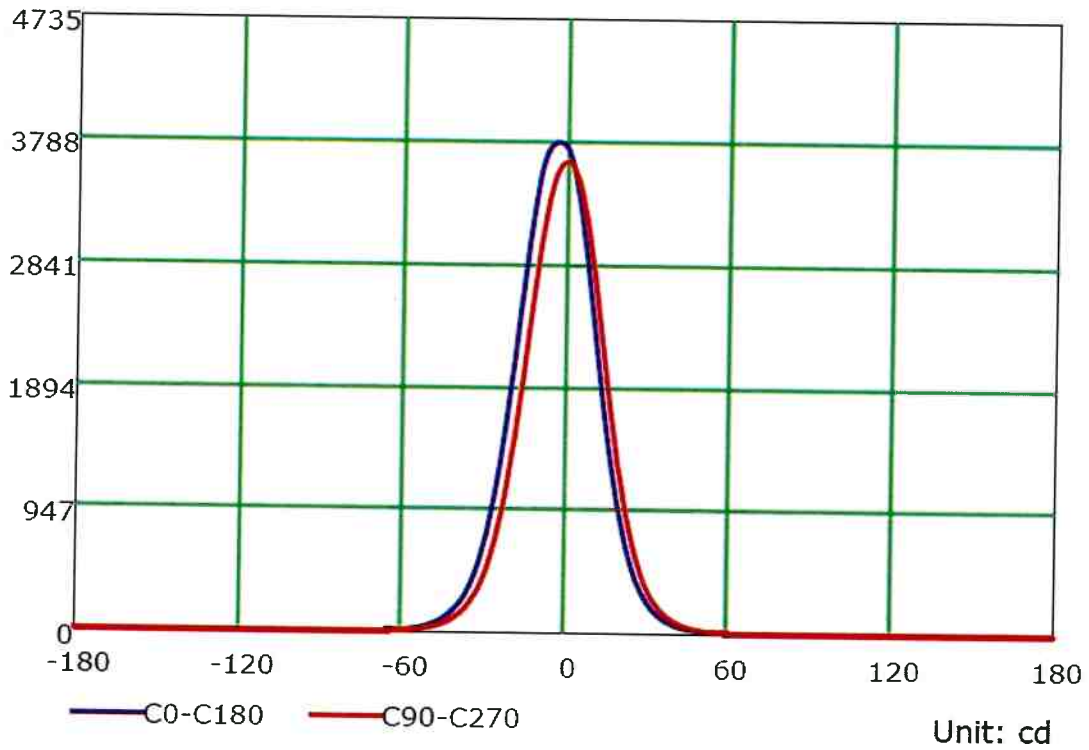
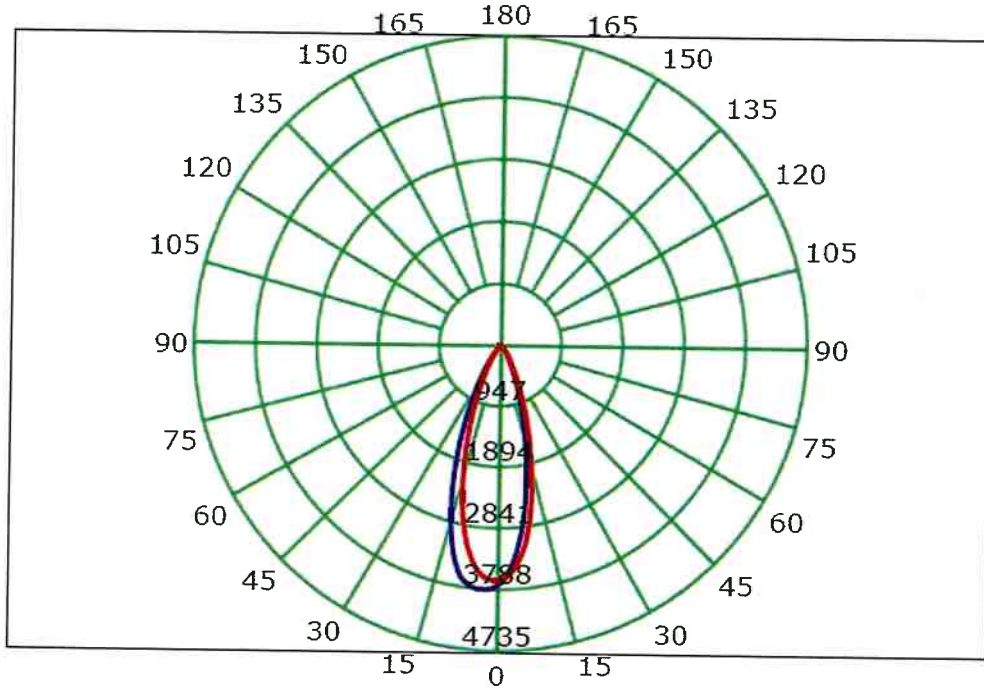
Rating:49W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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	0.22
	0.30		0.09	0.11	0.13	0.14	0.16	0.17	0.18	0.20	0.20
	0.20		0.07	0.09	0.11	0.12	0.14	0.16	0.17	0.18	0.19
0.50	0.50	0.20	0.12	0.14	0.15	0.16	0.18	0.19	0.19	0.20	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
0.30	0.50	0.20	0.12	0.14	0.15	0.16	0.17	0.18	0.19	0.19	0.20
	0.30		0.09	0.11	0.12	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.07	0.09	0.10	0.12	0.14	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:49W Photometrically tested without ceiling board.
 Multiply UF values by service correction factors
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Luminous Intensity Distribution Curve



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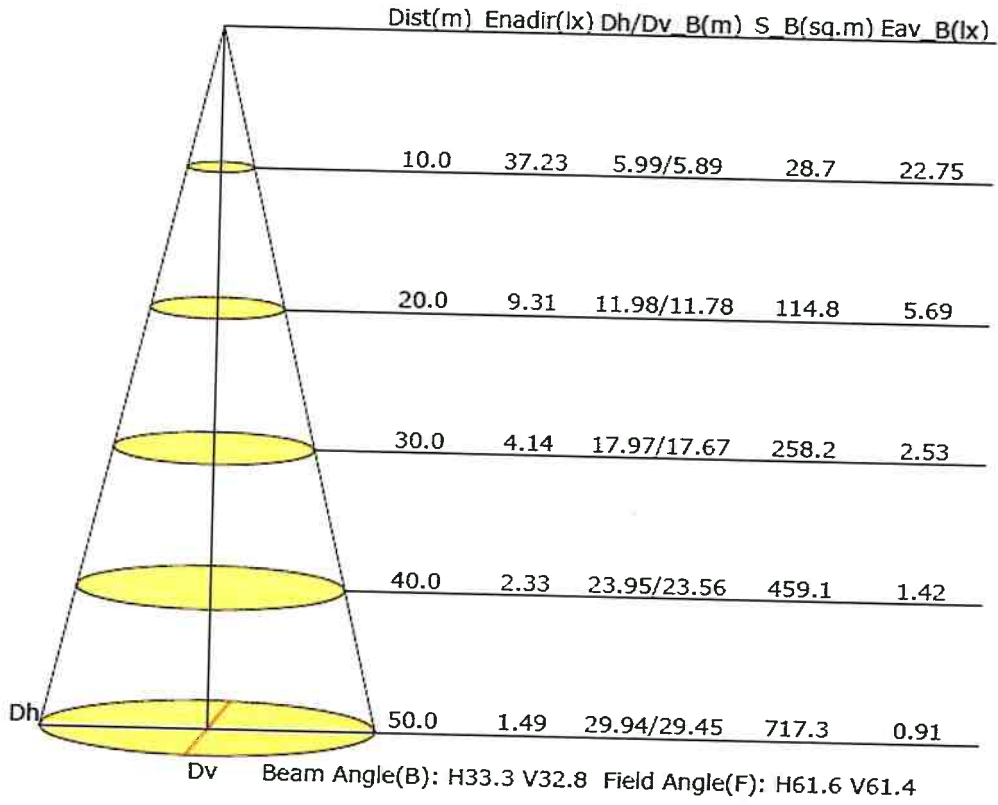
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Illuminance at a Distance



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Görsel Dökümanlar / Photo Documentation



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