



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:

171801-864-22

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

Procolor DC 60DW Floodlight Medium Beam 25° P03002122

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

03.01.2020

Deneyin Yapıldığı Tarih:
Date of test:

08.01.2020

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.



Bu rapor, Laboratuvarımızın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve mühürsüz raporlar geçersizdir.
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Deneyi Yapan Personel
Person in Performing the Test

Emine Nur ÇİDEM

Laboratuvar Teknik Yöneticisi
Laboratory Technical Manager

Murat ÇİTİL

DENEY RAPORU / TEST REPORT

Deney Rapor No / Test Report No: 171801-864-22

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

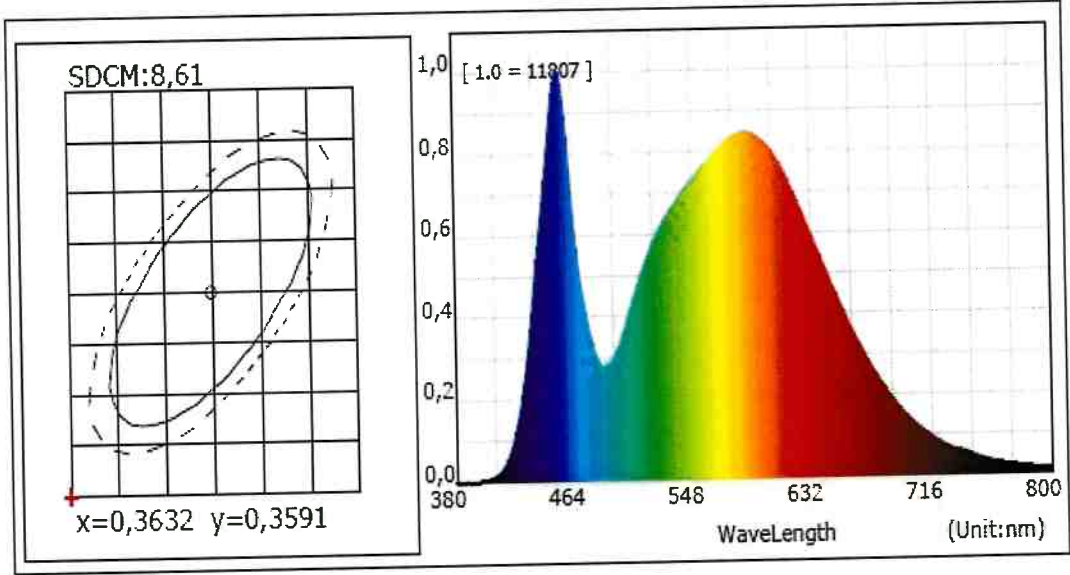
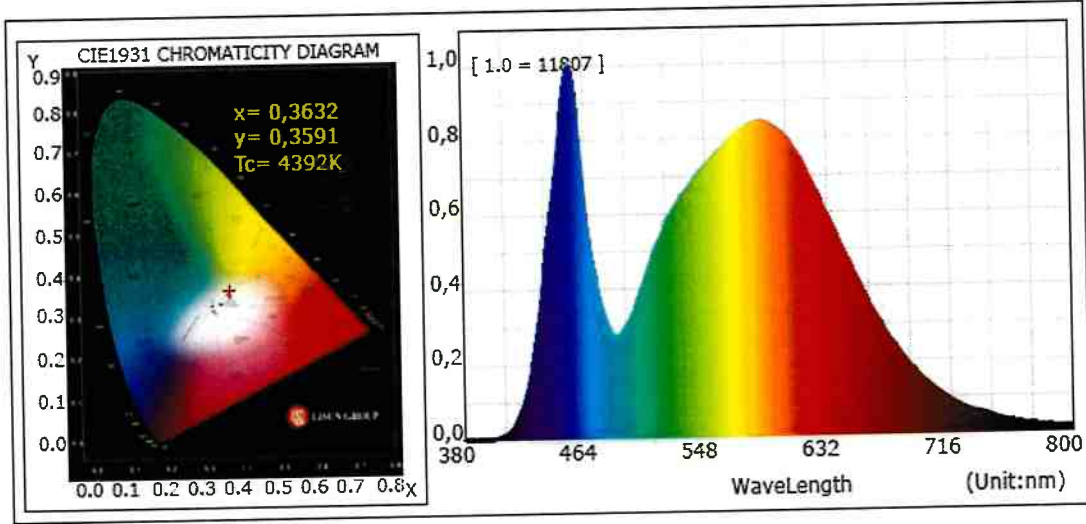
Kullanılan Cihaz/Equipment Used.....:	Goniophotometer System (LSG-1700B) Sphere System (LMS-7000)
Uygulanan Standart-Metot/Applied Standard-Method.....:	IES-LM-79-08 Electrical and Photometric Measurements of Solid-State Lighting Products TS EN13032-1:2004 +A1:2012 Light and Lighting Measurement and Presentation of Photometric Data of Lamps and Luminaires-Part 1: Measurement and File.
Deney Ortam Şartları/Experimental Ambient Conditions.....:	25°C ±1°C, 60%RH±5%RH
Armatüre Uygulanan Gerilim / Applied Voltage.....:	48 V dc
Armatür Markası-Üretici/Luminaire Brand-Producer.....:	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Armatür Kodu-Modeli/Luminaire Code-Model.....:	Procolor DC 60DW Floodlight Medium Beam 25° P03002122

Armatürde Ölçülen Toplam Güç / Measured Total Power of Luminaire.....:	40.32 W ;
Armatürün Ölçülen Işık Akısı / Measured Luminous Flux of Luminaire.....:	2003.6 lm (Effective Value)
Armatür verimliliği (lm/Watt) / Luminous efficiency.....:	49.69 lm/Watt
Beam Angle (C0/C180,C90/C270,C45/C225,C135/315):	33.3, 33.2,33.2,33.2

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Date/Time	08.01.2020 13:00
Chromaticity x coord	0,3632
Chromaticity y coord	0,3591
Chromaticity u coord	0,2207
Chromaticity v coord	0,3273
Chromaticity u' coord	0,2207
Chromaticity v' coord	0,4909
Peak Wavelength (nm)	454,4
Half Wavelength (nm)	32,0
Dominant Wavelength (nm)	579,9
Color Purity (%)	16,738
Correlated Color Temperature (deg. K)	4392
SDCM	8,61
Color Rendering Index Average (RA)	82,0
Color Rendering Index (R1)	81
Color Rendering Index (R2)	88
Color Rendering Index (R3)	92
Color Rendering Index (R4)	80
Color Rendering Index (R5)	80
Color Rendering Index (R6)	82
Color Rendering Index (R7)	86
Color Rendering Index (R8)	67
Color Rendering Index (R9)	12
Color Rendering Index (R10)	70
Color Rendering Index (R11)	77
Color Rendering Index (R12)	59
Color Rendering Index (R13)	83
Color Rendering Index (R14)	95
Color Rendering Index (R15)	77

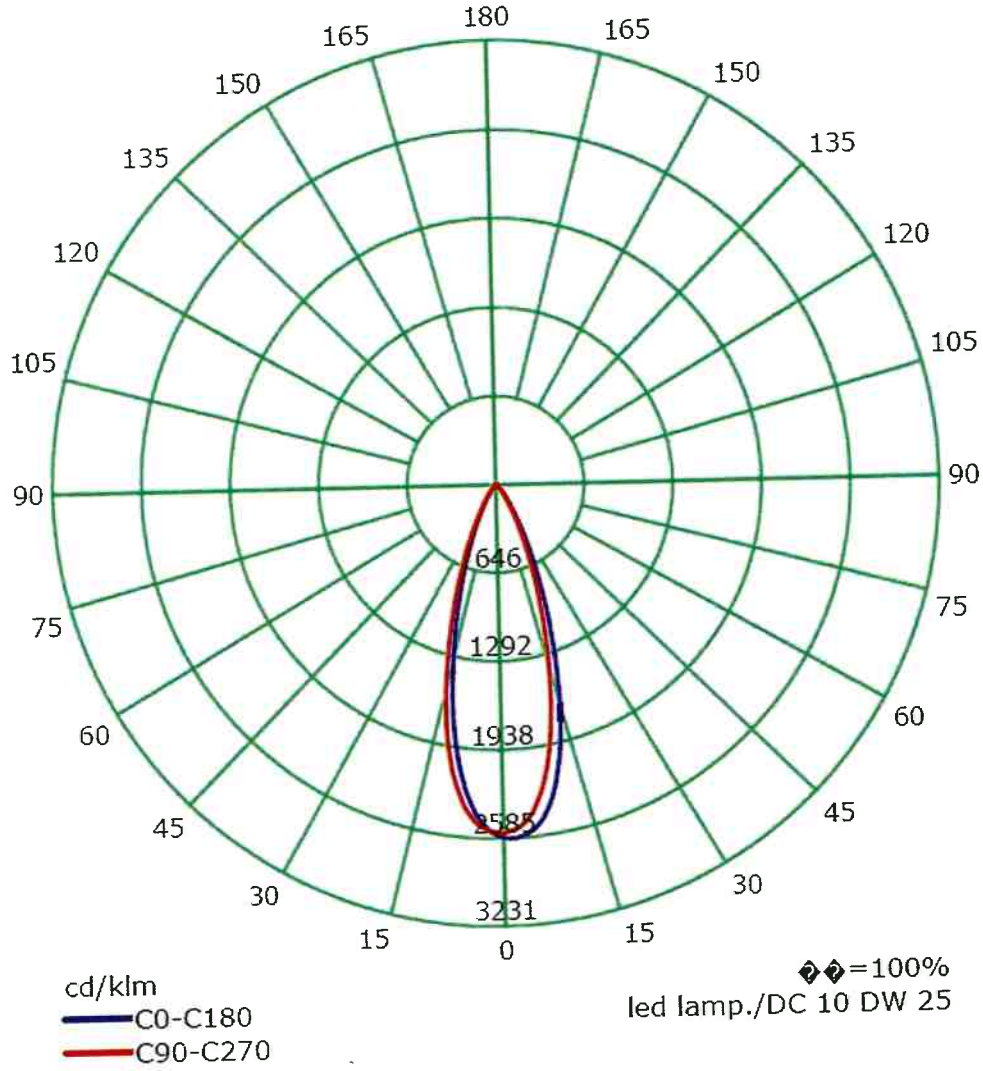
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Luminous Intensity Distribution Curve(cd/klm)



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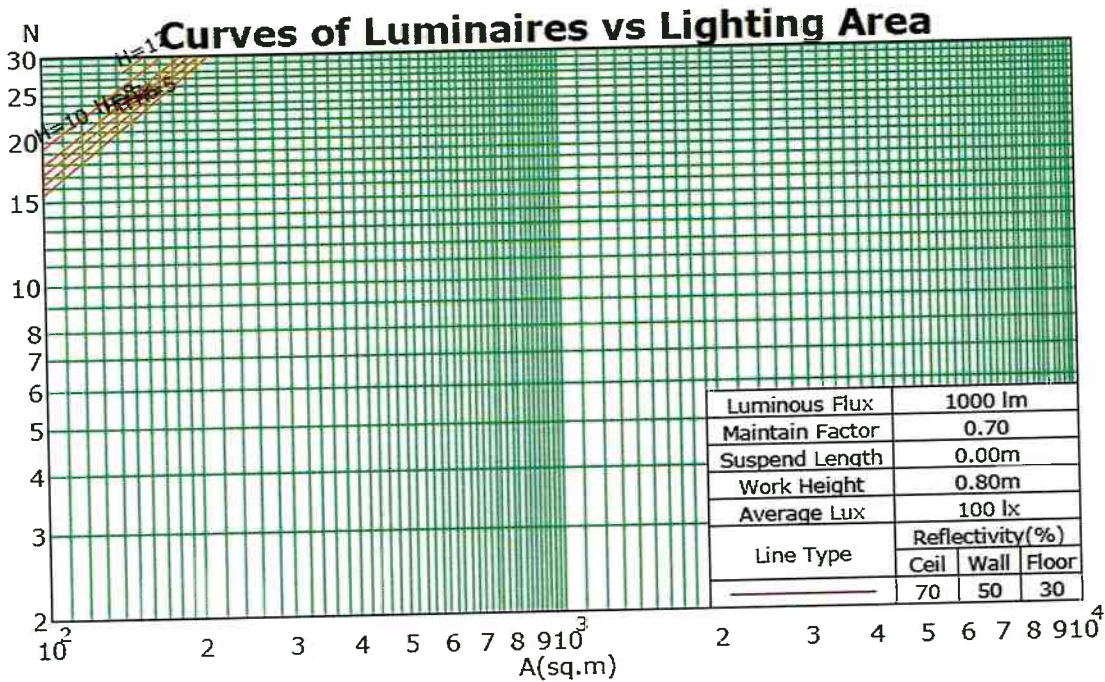
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Coefficients Of Utilization - Zonal Cavity Method

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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90
3	105	100	96	92	103	99	95	92	96	93	90	94	91	89	91	89	87	86
4	101	95	90	87	99	94	89	86	92	88	85	90	87	84	88	85	83	82
5	97	90	85	82	96	89	85	81	88	84	81	86	83	80	85	82	79	78
6	94	86	81	78	92	85	81	77	84	80	77	83	79	76	81	78	76	75
7	90	82	77	74	89	82	77	74	81	76	73	79	76	73	78	75	73	71
8	87	79	74	70	86	78	74	70	77	73	70	76	73	70	75	72	70	68
9	84	76	71	67	83	75	71	67	74	70	67	74	70	67	73	69	67	66
10	81	73	68	65	80	72	68	65	72	67	65	71	67	64	70	67	64	63

Spacing Criteria (0-180): 0.55
 Spacing Criteria (90-270): 0.55
 Spacing Criteria (Diagonal): 0.55



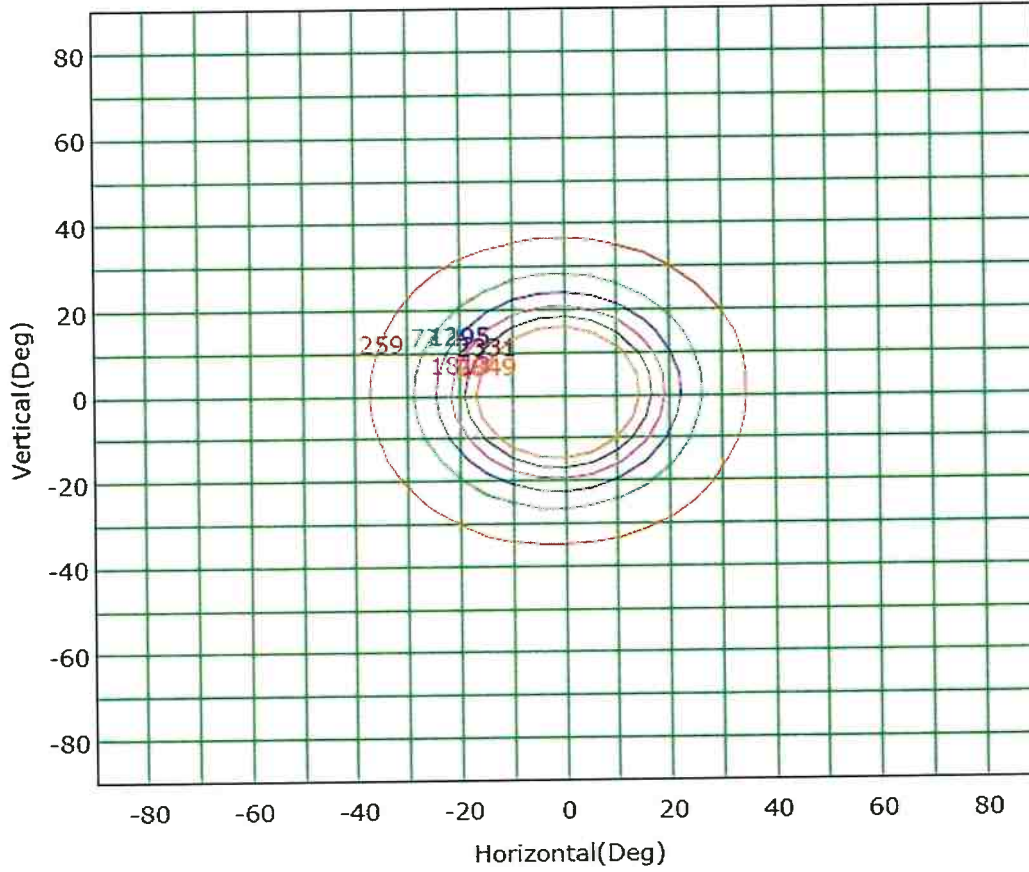
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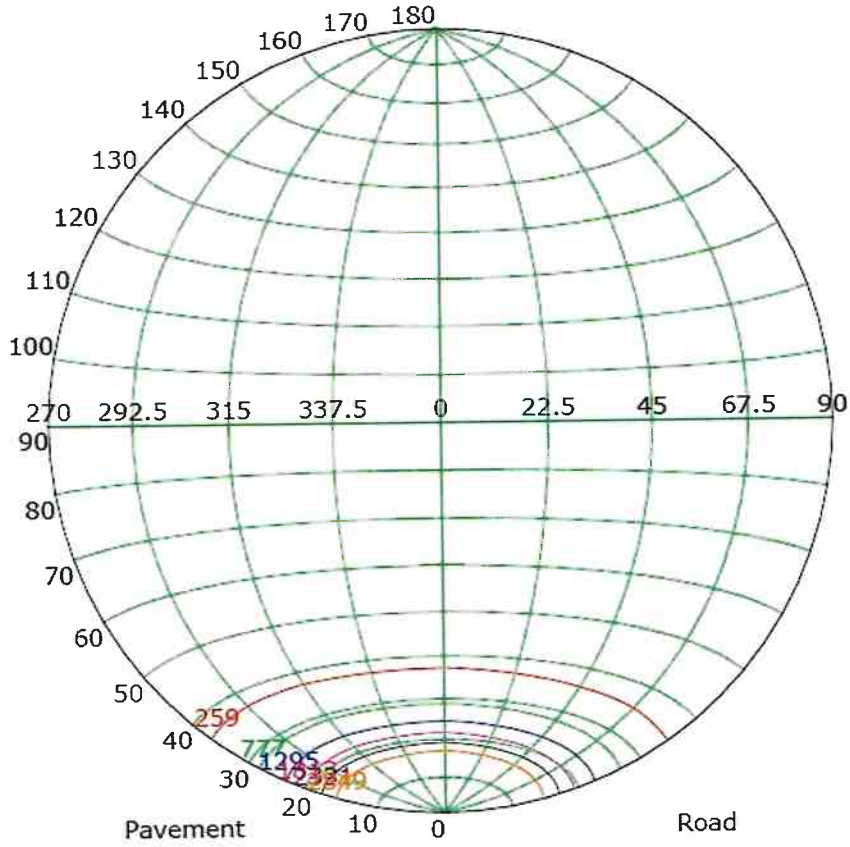
Isocandela (rectangle)



Imax (100%): 5179 cd

— (5%): 259 cd	— (15%): 777 cd
— (25%): 1295 cd	— (35%): 1813 cd
— (45%): 2331 cd	— (55%): 2849 cd

Isocandela (sphere)



Imax (100%): 5179 cd

— (5%): 259 cd	— (15%): 777 cd
— (25%): 1295 cd	— (35%): 1813 cd
— (45%): 2331 cd	— (55%): 2849 cd

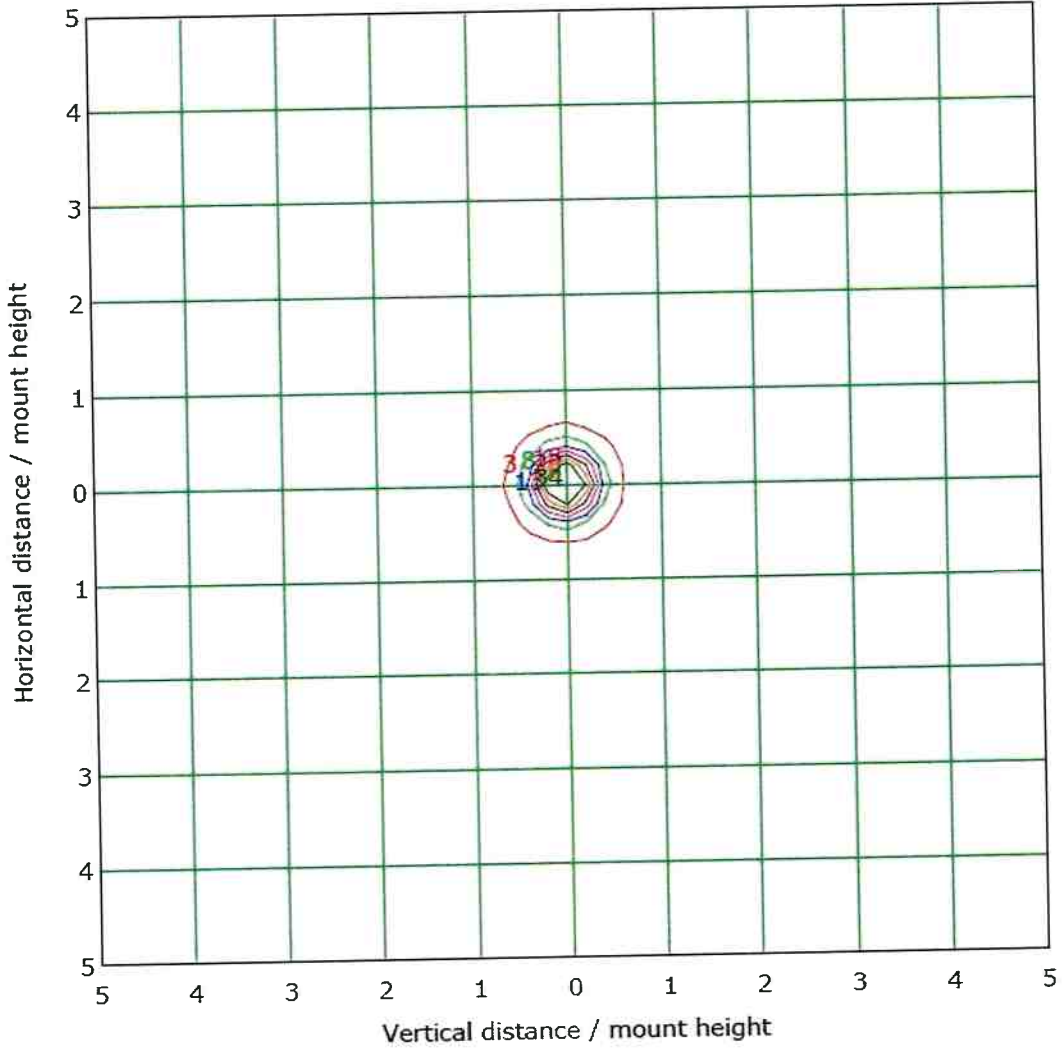
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IsoLux Plot

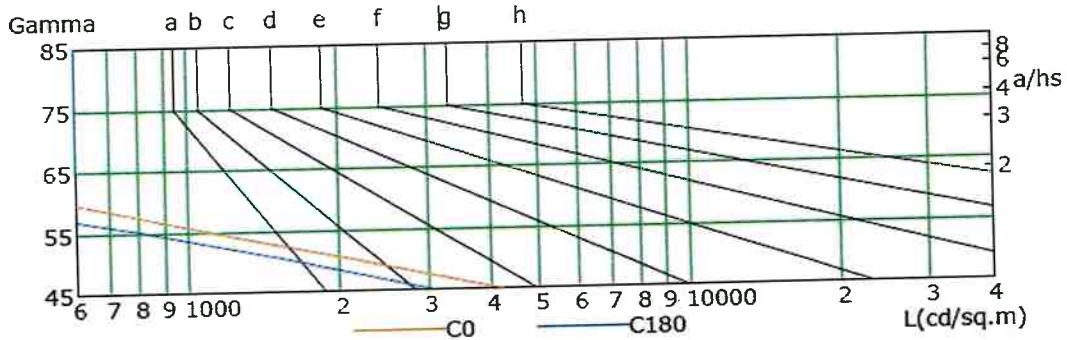
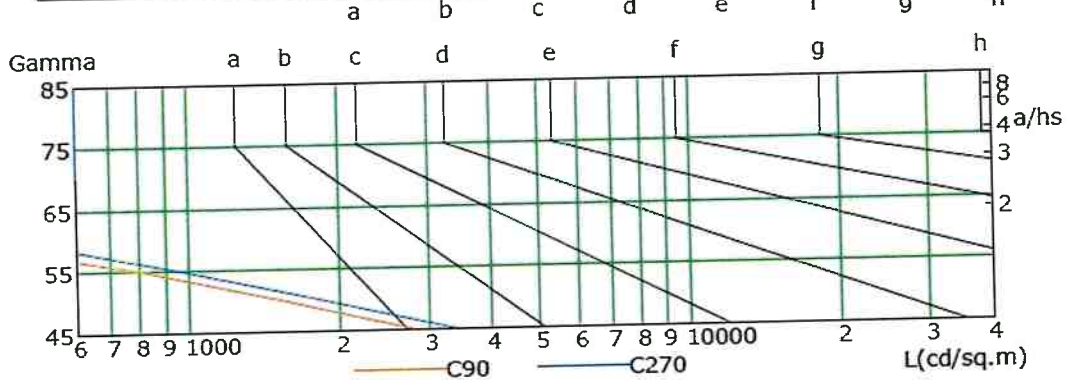


— (5%): 2.6 lx	— (15%): 7.8 lx
— (25%): 12.9 lx	— (35%): 18.1 lx
— (45%): 23.3 lx	— (55%): 28.5 lx
— (65%): 33.7 lx	

Mounting Height: 10.0m Max Lux(100%): 51.8 lx

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	4213	2172	1108	579	198	0	0	0	0
C90	2802	1527	807	344	64	0	0	0	0
C180	3086	1629	820	376	0	0	0	0	0
C270	3380	1822	962	470	127	0	0	0	0

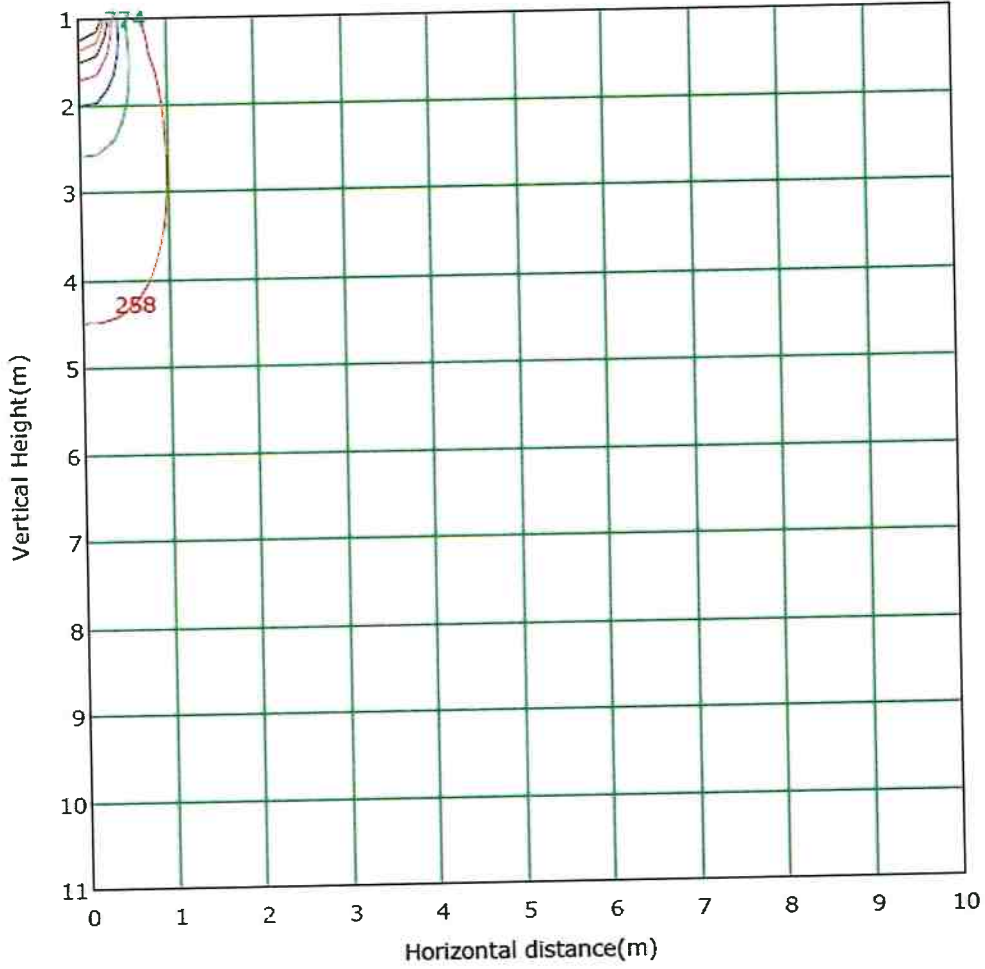
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Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 11.0m	Max Lux: 5162.5 lx
— (5%): 258.1 lx	— (15%): 774.4 lx	
— (25%):1290.6 lx	— (35%):1806.9 lx	
— (45%):2323.1 lx	— (55%):2839.4 lx	
— (65%):3355.6 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	10.7	11.4	10.9	11.6	11.8	9.8	10.5	10.1	10.7	10.9
3H	10.5	11.2	10.8	11.4	11.7	9.7	10.3	9.9	10.5	10.8
4H	10.5	11.1	10.8	11.3	11.6	9.6	10.2	9.9	10.5	10.7
6H	10.4	11.0	10.7	11.2	11.5	9.5	10.1	9.8	10.4	10.7
8H	10.3	10.9	10.7	11.2	11.5	9.5	10.0	9.8	10.3	10.6
12H	10.3	10.8	10.7	11.1	11.5	9.4	10.0	9.8	10.3	10.6
X=4H Y=2H	10.5	11.1	10.8	11.4	11.6	9.6	10.2	9.9	10.5	10.8
3H	10.3	10.9	10.7	11.2	11.5	9.5	10.0	9.8	10.3	10.6
4H	10.3	10.7	10.6	11.1	11.4	9.4	9.8	9.8	10.2	10.5
6H	10.2	10.6	10.6	10.9	11.3	9.3	9.7	9.7	10.1	10.5
8H	10.1	10.5	10.5	10.9	11.3	9.3	9.6	9.7	10.0	10.4
12H	10.1	10.4	10.5	10.8	11.3	9.2	9.5	9.6	10.0	10.4
X=8H Y=4H	10.1	10.5	10.5	10.9	11.3	9.3	9.6	9.7	10.0	10.4
6H	10.0	10.3	10.5	10.8	11.2	9.2	9.5	9.6	9.9	10.3
8H	10.0	10.2	10.4	10.7	11.2	9.1	9.4	9.6	9.8	10.3
12H	9.9	10.2	10.4	10.6	11.1	9.1	9.3	9.5	9.8	10.3
X=12H Y=4H	10.1	10.4	10.5	10.8	11.3	9.2	9.5	9.6	10.0	10.4
6H	10.0	10.2	10.4	10.7	11.2	9.1	9.4	9.6	9.8	10.3
8H	9.9	10.2	10.4	10.6	11.1	9.1	9.3	9.5	9.8	10.3
Variations with the observer position at spacings:										
S=1.0H	+4.8/-7.9					+4.7/-8.1				
S=1.5H	+7.6/-14.2					+7.3/-13.3				
S=2.0H	+9.7/-39.7					+9.3/-21.9				

Calculate in accordance with CIE Pub.117. The table is revised with 2004Im ($8\log(F/F_0) = 2.4$).

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	0.93	0.98	1.01	1.04	1.07	1.09	1.10	1.12	1.13
	0.30		0.90	0.95	0.98	1.00	1.04	1.06	1.08	1.10	1.12
	0.20		0.87	0.92	0.95	0.98	1.02	1.04	1.06	1.09	1.10
0.50	0.50	0.20	0.92	0.97	0.99	1.01	1.04	1.06	1.07	1.08	1.09
	0.30		0.89	0.93	0.97	0.99	1.02	1.04	1.05	1.07	1.08
	0.20		0.86	0.91	0.94	0.97	1.00	1.02	1.03	1.06	1.07
0.30	0.50	0.20	0.91	0.95	0.98	0.99	1.01	1.03	1.04	1.05	1.05
	0.30		0.88	0.92	0.95	0.97	1.00	1.01	1.02	1.04	1.04
	0.20		0.86	0.90	0.93	0.95	0.98	1.00	1.01	1.03	1.04
0.00	0.00	0.00	0.85	0.89	0.91	0.93	0.95	0.96	0.97	0.98	0.99

Rating:51W 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	0.47	0.38	0.32	0.28	0.22	0.18	0.16	0.12	0.10
		0.30	0.39	0.33	0.28	0.25	0.20	0.17	0.14	0.11	0.09
		0.20	0.34	0.29	0.25	0.22	0.18	0.16	0.13	0.11	0.09
0.50	0.50	0.20	0.45	0.36	0.30	0.26	0.20	0.21	0.14	0.11	0.09
		0.30	0.38	0.31	0.26	0.23	0.18	0.15	0.13	0.10	0.08
		0.20	0.33	0.27	0.24	0.21	0.17	0.14	0.12	0.10	0.08
0.30	0.50	0.20	0.42	0.33	0.28	0.24	0.18	0.15	0.13	0.10	0.08
		0.30	0.36	0.29	0.25	0.22	0.17	0.14	0.12	0.09	0.08
		0.20	0.32	0.26	0.23	0.20	0.16	0.13	0.11	0.09	0.07
0.00	0.00	0.00	0.17	0.13	0.11	0.09	0.07	0.05	0.05	0.03	0.03

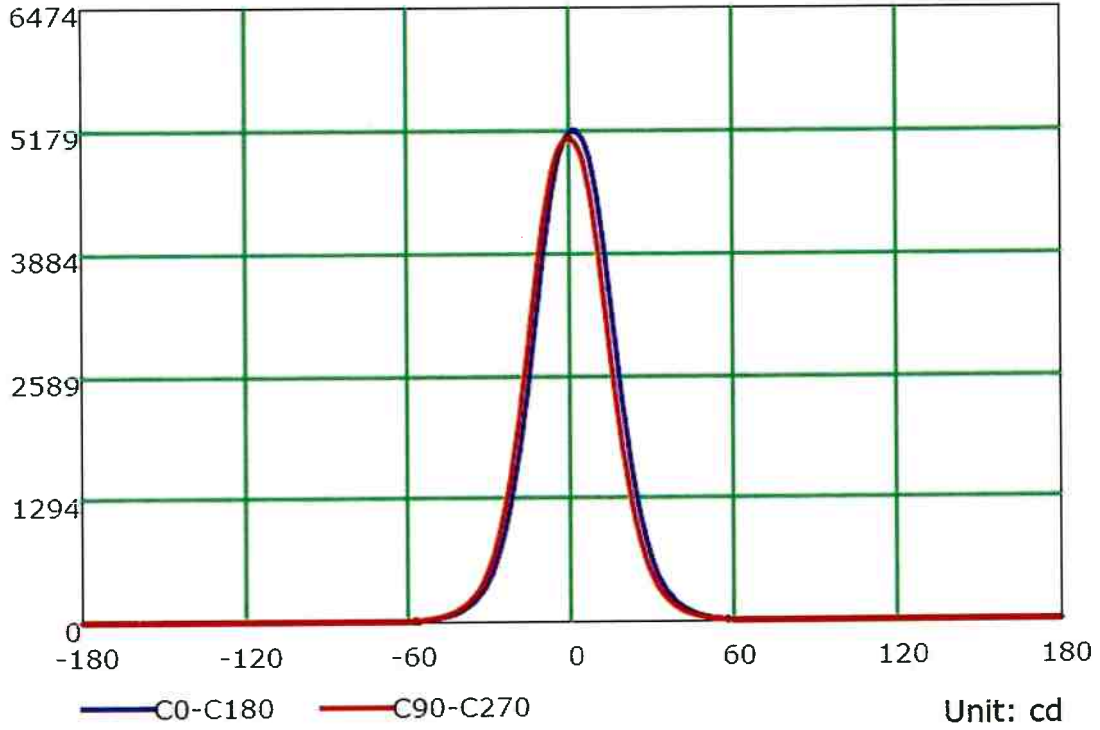
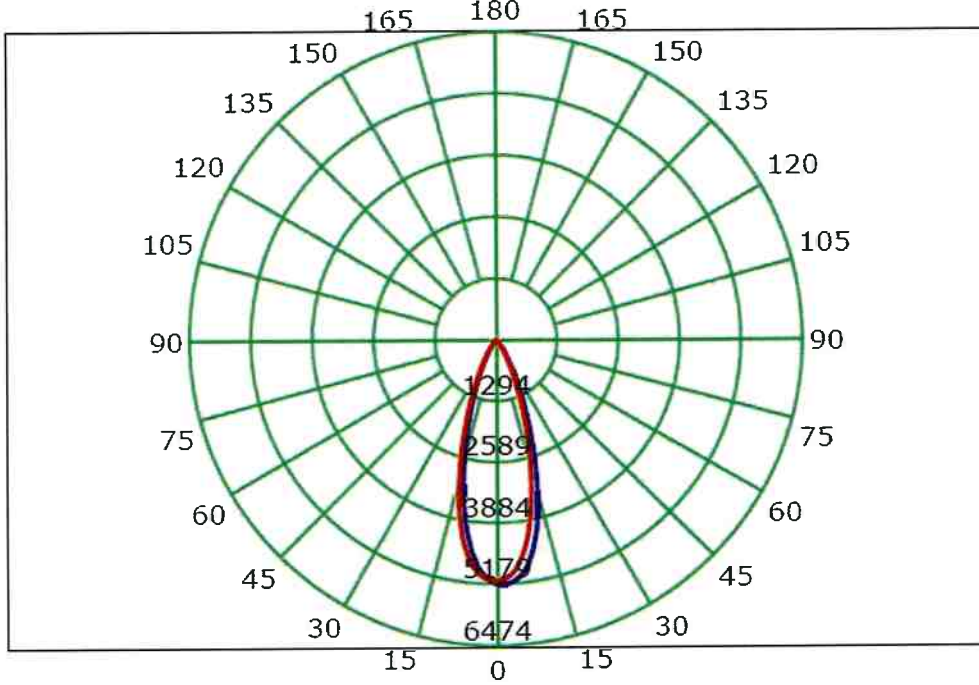
Rating:51W Photometrically tested without ceiling board.
 Multiply UF values by service correction factors
 Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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	0.12	0.14	0.15	0.16	0.18	0.19	0.19	0.20	0.21
		0.30	0.09	0.11	0.12	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	0.13	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	0.11	0.13	0.14	0.15	0.16	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	0.18
		0.20	0.06	0.08	0.10	0.11	0.13	0.14	0.15	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:51W 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



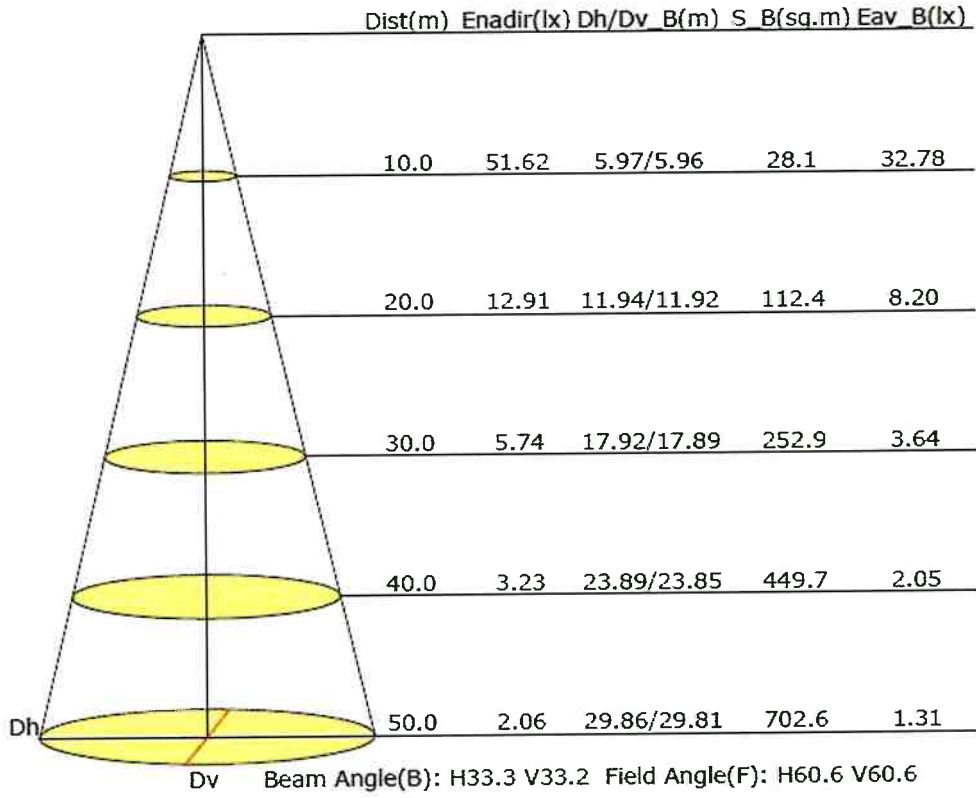
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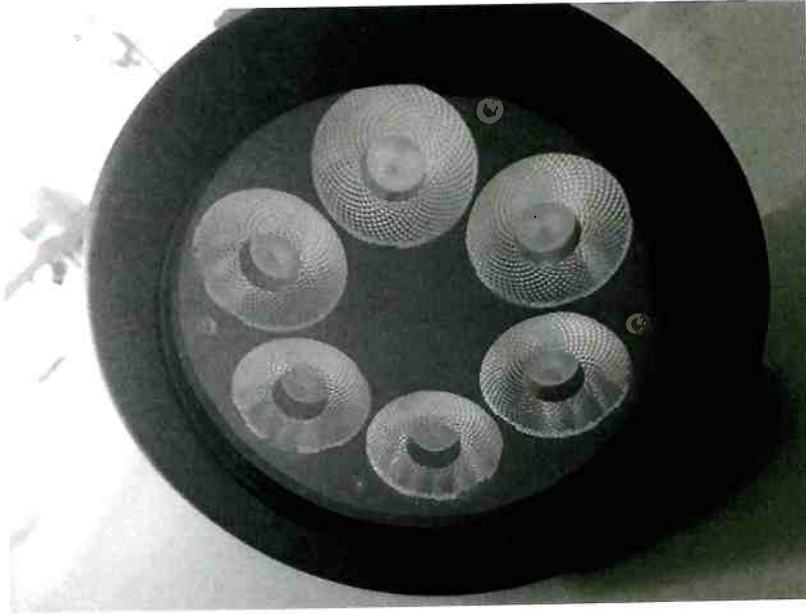
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Illuminance at a Distance



Görsel Dökümanlar / Photo Documentation



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