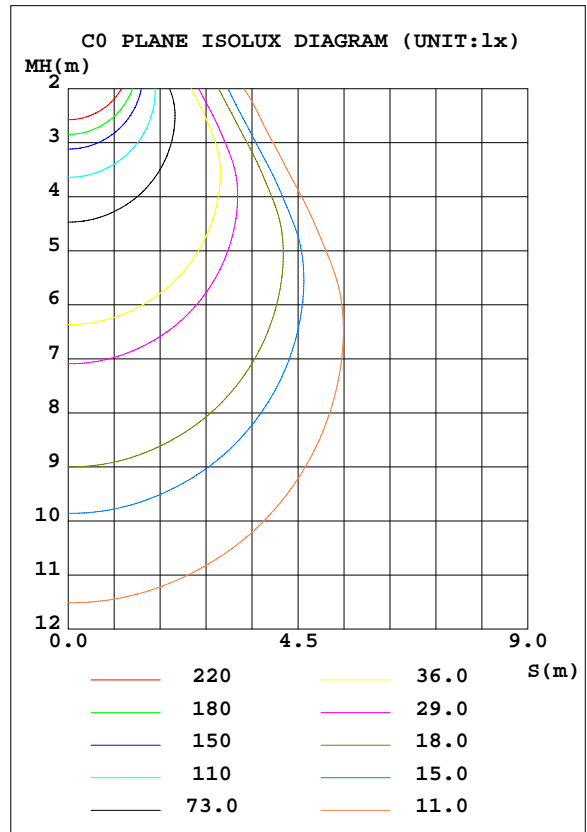
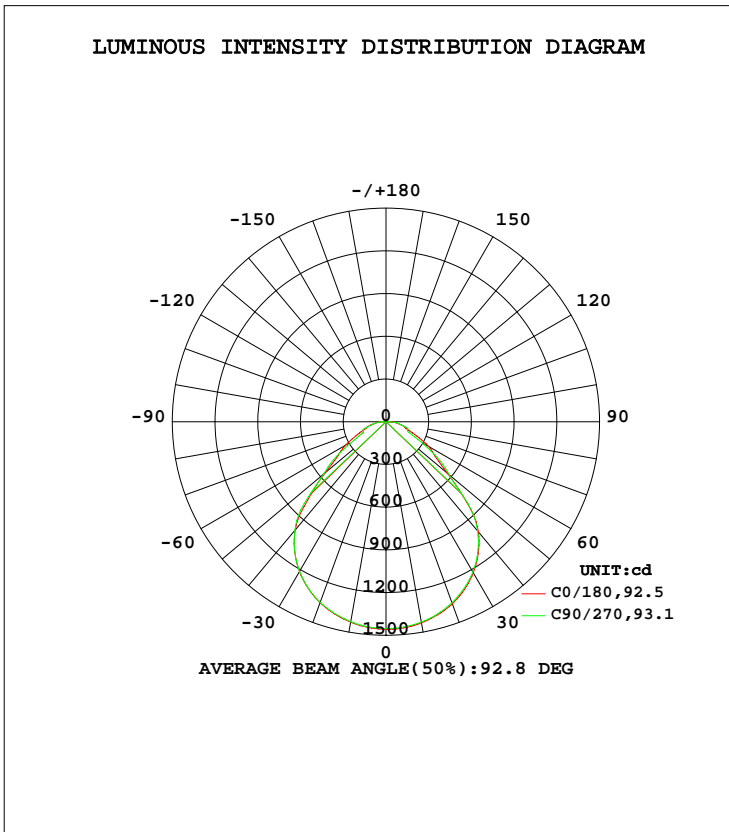


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 87.28 lm/W			
MODEL		I _{max} (cd)	1458	S/MH(C0/180)	1.24
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	3231.2	η UP, DN(C0-180)	0.0,50.3
NOMINAL FLUX(lm)	3231.23	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.0	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

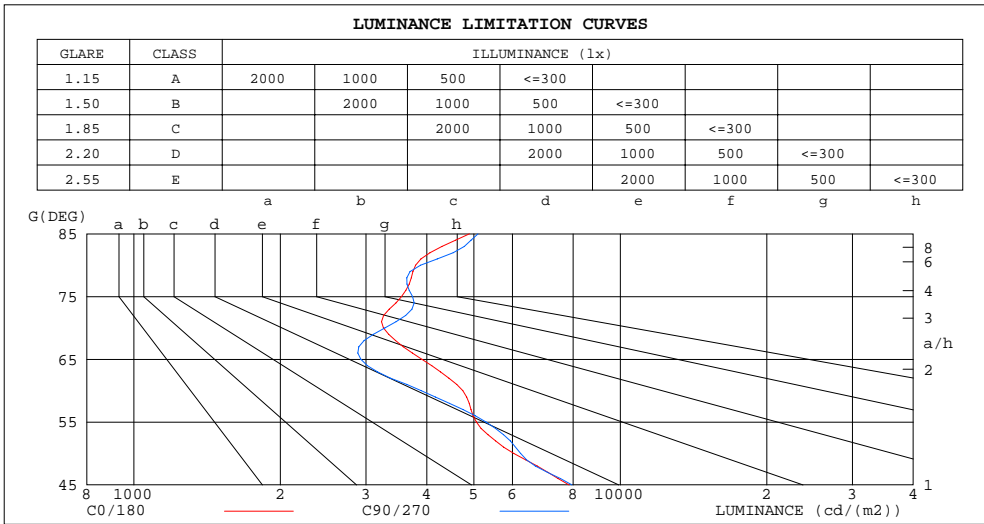
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	1434	1432	1428	1425	1429	1427	1426	1426	0- 10	137.5	137.5	4.26,4.26
20	1361	1357	1353	1347	1353	1349	1350	1351	10- 20	394.1	531.6	16.5,16.5
30	1226	1222	1219	1212	1215	1210	1214	1218	20- 30	595.1	1127	34.9,34.9
40	1009	1001	1001	995.9	992.8	986.7	996.3	1007	30- 40	698.1	1825	56.5,56.5
50	562.6	549.4	581.2	599.2	559.8	521.1	573.1	613.2	40- 50	609.7	2434	75.3,75.3
60	343.9	321.0	282.5	303.9	325.0	305.7	257.9	292.9	50- 60	382.8	2817	87.2,87.2
70	161.6	169.0	162.7	167.6	163.1	150.3	171.9	175.6	60- 70	215.2	3032	93.8,93.8
80	95.53	96.60	97.80	92.68	87.09	85.95	91.15	90.81	70- 80	137.4	3170	98.1,98.1
90	13.43	13.03	10.42	8.093	5.816	4.974	6.177	9.081	80- 90	61.45	3231	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4894	5098
80	3794	3884
75	3550	3740
70	3259	3280
65	3908	2927
60	4744	3897
55	5060	5297
50	6036	6236
45	7845	7954

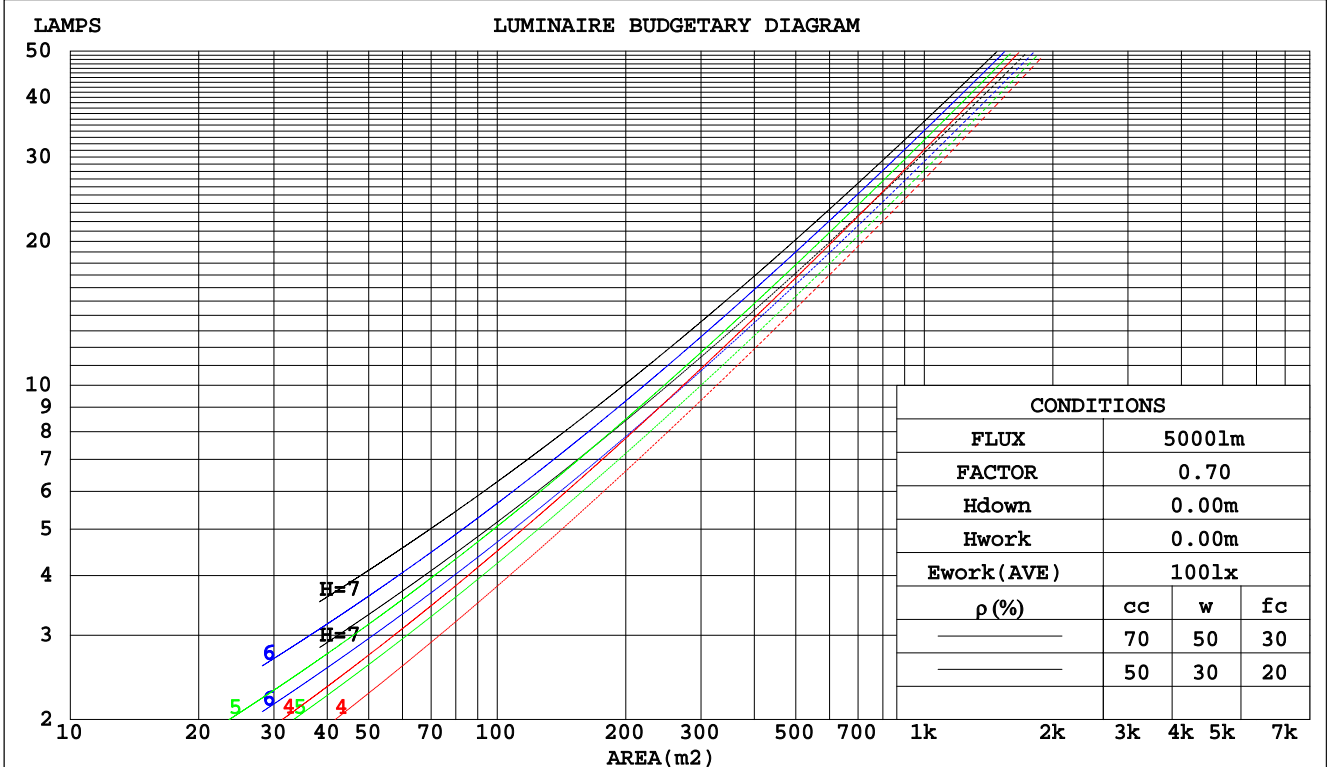
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.06	1.02	.98	1.03	1.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.94	.88	.83	.92	.87	.82	.89	.84	.80	.85	.82	.78	.82	.79	.76	.74
3.0	.84	.77	.71	.82	.76	.70	.80	.74	.69	.77	.72	.68	.74	.70	.67	.65
4.0	.75	.67	.61	.74	.67	.61	.72	.65	.60	.69	.64	.59	.67	.63	.59	.57
5.0	.68	.60	.54	.67	.59	.54	.65	.58	.53	.63	.57	.53	.61	.56	.52	.50
6.0	.62	.54	.48	.61	.53	.48	.59	.52	.47	.58	.52	.47	.56	.51	.46	.44
7.0	.57	.48	.43	.56	.48	.43	.54	.47	.42	.53	.47	.42	.52	.46	.42	.40
8.0	.52	.44	.38	.51	.44	.38	.50	.43	.38	.49	.43	.38	.48	.42	.38	.36
9.0	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.35	.44	.38	.34	.33
10.0	.44	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.32	.41	.35	.31	.30



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.274	.156	.049	.267	.152	.048	.254	.146	.047	.242	.140	.045	.231	.134	.043	
2.0	.258	.141	.043	.252	.139	.043	.240	.134	.042	.230	.129	.040	.220	.125	.039	
3.0	.241	.128	.038	.235	.126	.038	.225	.122	.037	.216	.118	.036	.207	.115	.036	
4.0	.224	.117	.034	.220	.115	.034	.211	.112	.033	.203	.109	.033	.195	.106	.032	
5.0	.209	.107	.031	.205	.105	.031	.197	.103	.030	.190	.100	.030	.183	.098	.029	
6.0	.196	.098	.028	.192	.097	.028	.185	.095	.028	.179	.093	.027	.173	.091	.027	
7.0	.184	.091	.026	.181	.090	.026	.174	.088	.025	.169	.086	.025	.163	.085	.025	
8.0	.173	.085	.024	.170	.084	.024	.165	.082	.023	.159	.081	.023	.154	.079	.023	
9.0	.163	.079	.022	.161	.078	.022	.156	.077	.022	.151	.076	.022	.146	.074	.021	
10.0	.154	.074	.021	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.020	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.098	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.159	.114	.078	.136	.098	.068	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.151	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.022	.017	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.112	.064	.031	.077	.045	.022	.045	.027	.013	.014	.009	.004	
8.0	.124	.068	.030	.107	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.026	.102	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.113	.059	.023	.097	.051	.020	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.:			DIM.: 450*82			SERIAL No.:				
MFR.:			SUR.:3.14*0.215*0.215			Shielding Angle:				
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	18.1	19.5	18.4	19.7	19.9	17.9	19.3	18.2	19.5	19.7
3H	18.7	20.0	19.0	20.2	20.5	18.7	20.0	19.0	20.2	20.4
4H	19.2	20.4	19.5	20.7	20.9	19.2	20.4	19.5	20.6	20.9
6H	19.7	20.8	20.0	21.1	21.3	19.6	20.7	19.9	21.0	21.3
8H	19.9	21.0	20.2	21.3	21.6	19.9	21.0	20.2	21.3	21.5
12H	20.1	21.2	20.5	21.5	21.8	20.1	21.2	20.5	21.5	21.8
4H 2H	18.3	19.5	18.6	19.8	20.0	18.2	19.4	18.5	19.7	19.9
3H	19.2	20.3	19.6	20.5	20.8	19.2	20.3	19.6	20.6	20.9
4H	19.9	20.9	20.3	21.2	21.5	19.9	20.8	20.3	21.2	21.5
6H	20.6	21.4	21.0	21.8	22.1	20.5	21.3	20.9	21.7	22.0
8H	20.9	21.7	21.3	22.1	22.4	20.8	21.6	21.3	22.0	22.4
12H	21.2	22.0	21.7	22.3	22.7	21.2	21.9	21.6	22.3	22.7
8H 4H	20.2	21.0	20.6	21.3	21.7	20.1	20.9	20.5	21.3	21.7
6H	21.1	21.7	21.5	22.1	22.5	20.9	21.6	21.3	22.0	22.4
8H	21.5	22.1	22.0	22.5	23.0	21.4	22.0	21.9	22.4	22.9
12H	22.0	22.5	22.5	23.0	23.4	21.9	22.4	22.4	22.9	23.4
12H 4H	20.2	20.9	20.6	21.3	21.7	20.2	20.9	20.6	21.3	21.7
6H	21.1	21.7	21.6	22.1	22.6	21.0	21.6	21.5	22.0	22.5
8H	21.7	22.2	22.2	22.6	23.1	21.6	22.1	22.1	22.5	23.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.2				
2.0H	+ 0.8 / - 0.8					+ 0.8 / - 0.7				

CIE Pub.117, 3231 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 4.1)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

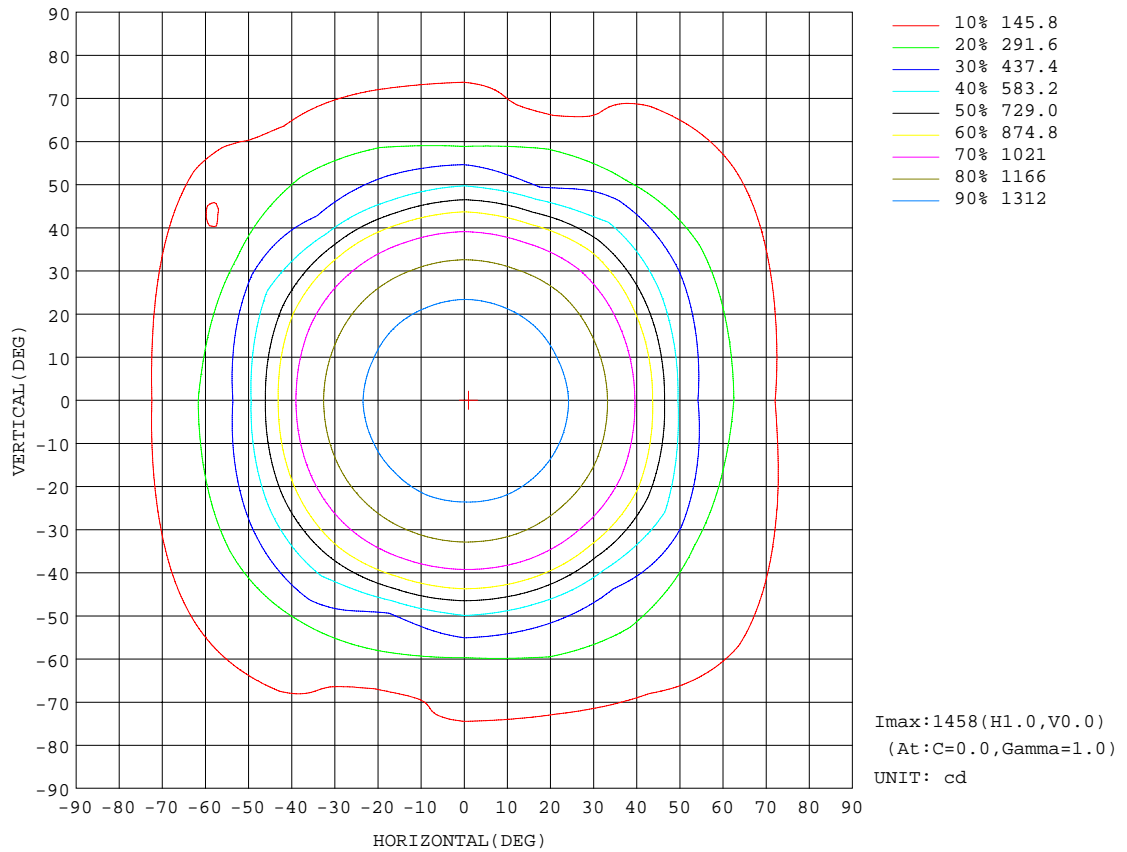
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	64	54	48	64	54	48	63	53	47	42
0.80	74	64	58	73	64	57	72	63	57	51
1.00	82	73	66	81	72	66	79	73	65	59
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	92	84	78	89	82	77	71
2.00	99	92	86	97	91	85	94	88	84	77
2.50	102	95	90	100	94	89	97	92	87	80
3.00	105	99	94	103	97	93	99	95	91	83
4.00	108	103	99	106	102	98	102	98	95	87
5.00	110	106	102	108	104	101	103	100	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

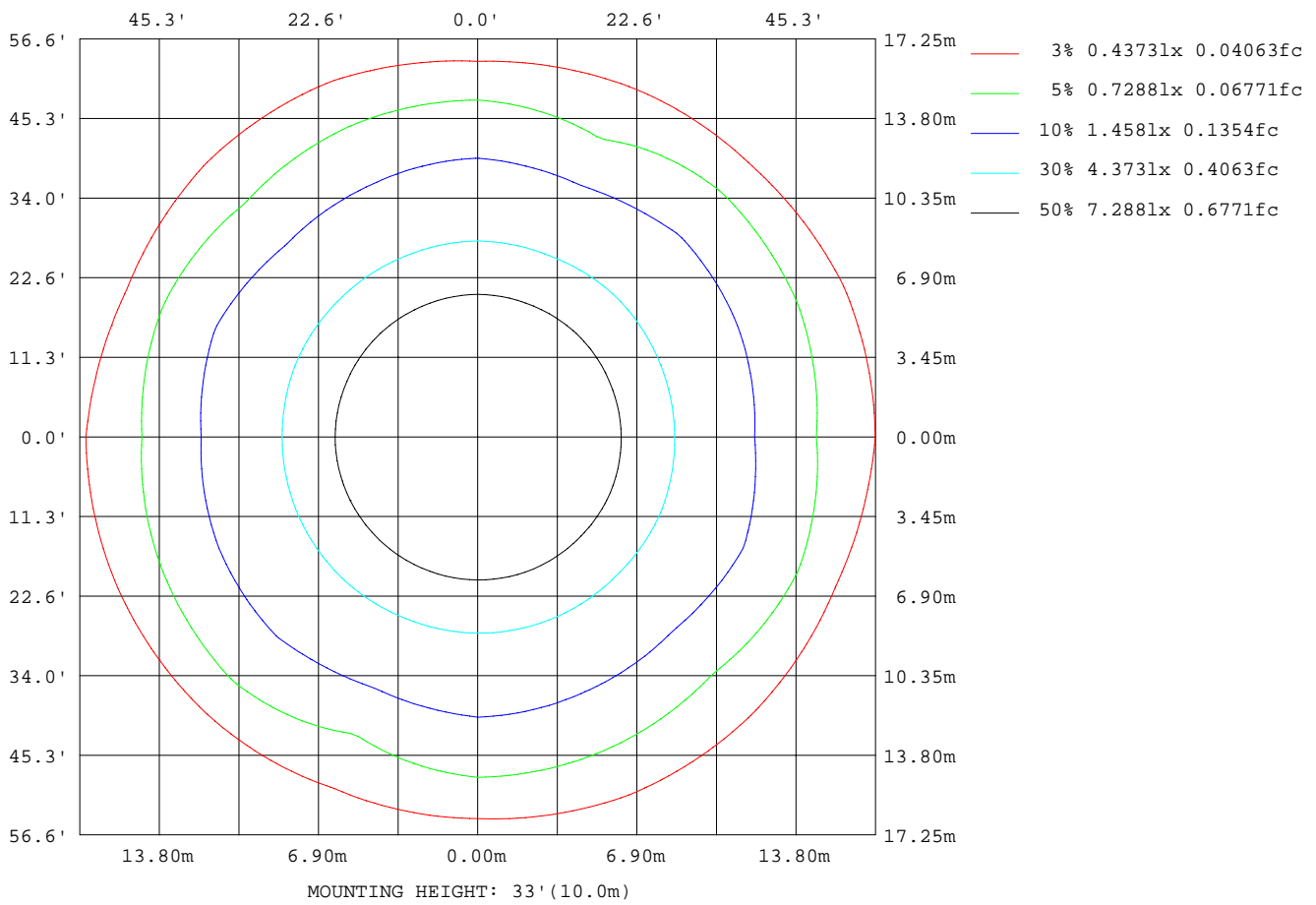


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:229.65V I:0.1653A P:37.021W PF:0.9750 Freq:49.99Hz Lamp Flux:3231.23x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

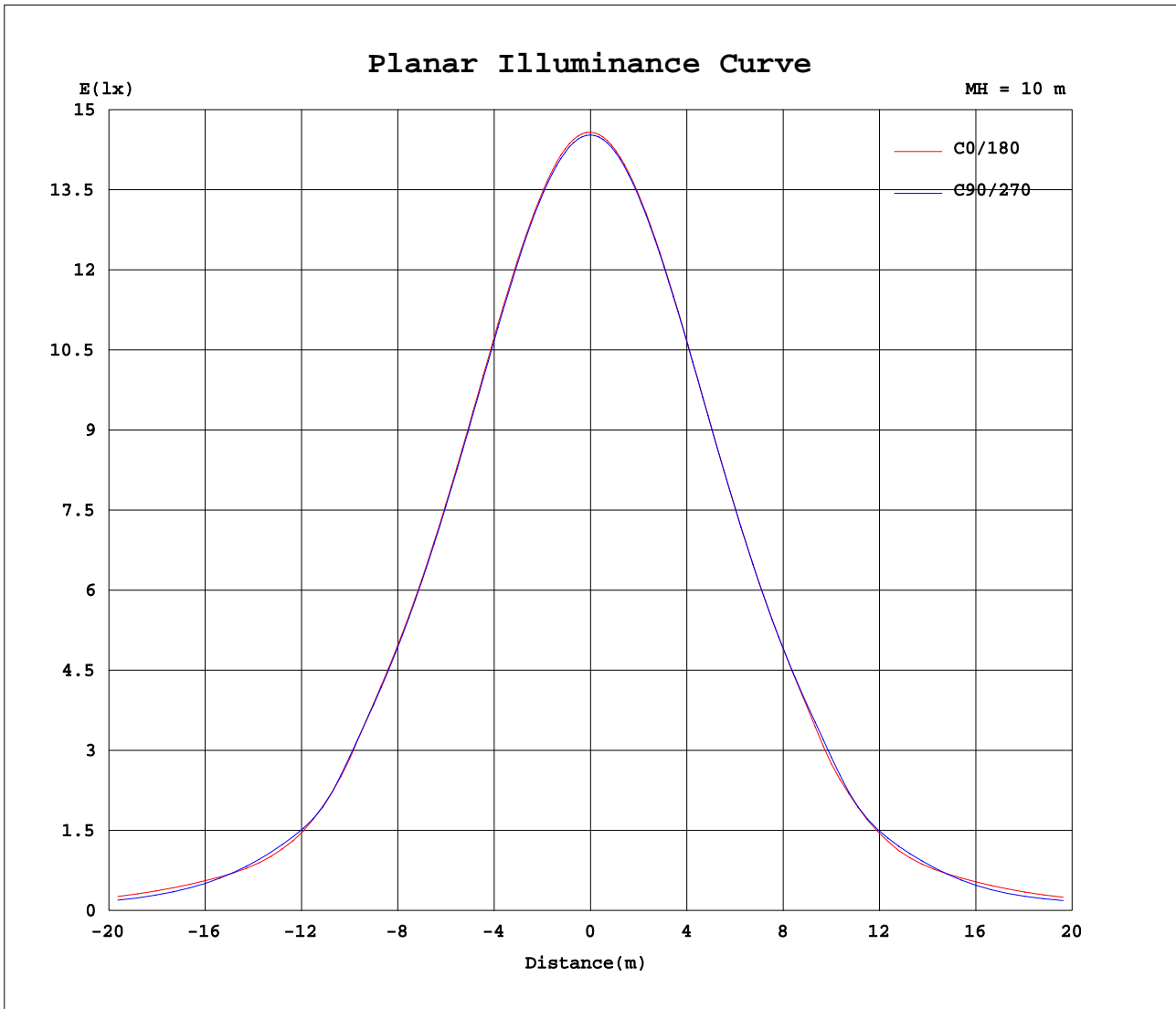
AvgL	cd/m2
L_0~180(65)av	3855
L_0~180(75)av	3566
L_0~180(85)av	4676
L_90~270(65)av	2928
L_90~270(75)av	3605
L_90~270(85)av	4693
L_45(65)av	3419
L_45(75)av	3538
L_45(85)av	4647

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity:65.0%
 Test Distance:11.700m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2025-05-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.406.10
 Humidity: 65.0%
 Test Distance: 11.700m [K=1.0000]
 Remarks:

