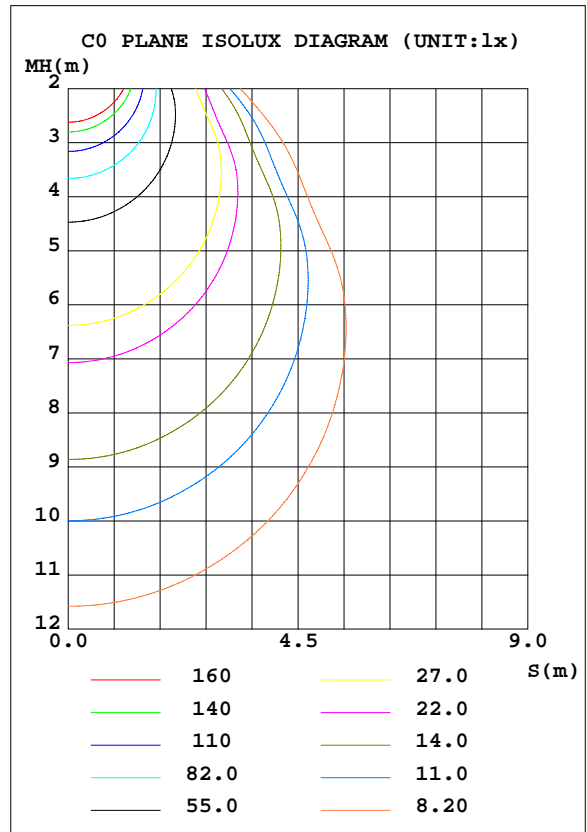
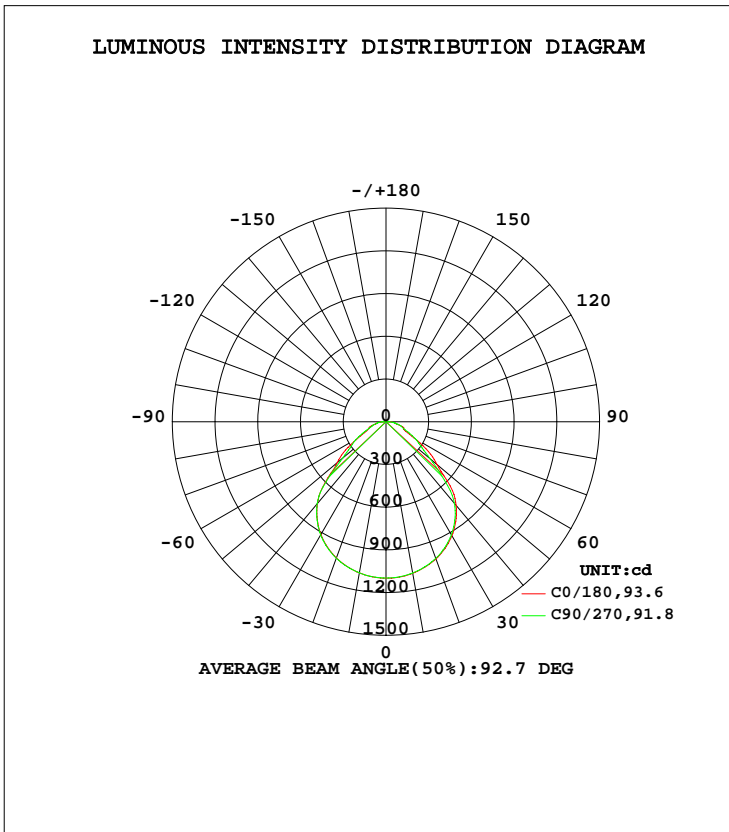


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 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: 87.77 lm/W			
MODEL		I _{max} (cd)	1099	S/MH(C0/180)	1.24
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2439.8	η UP, DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	2439.76	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.8
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:

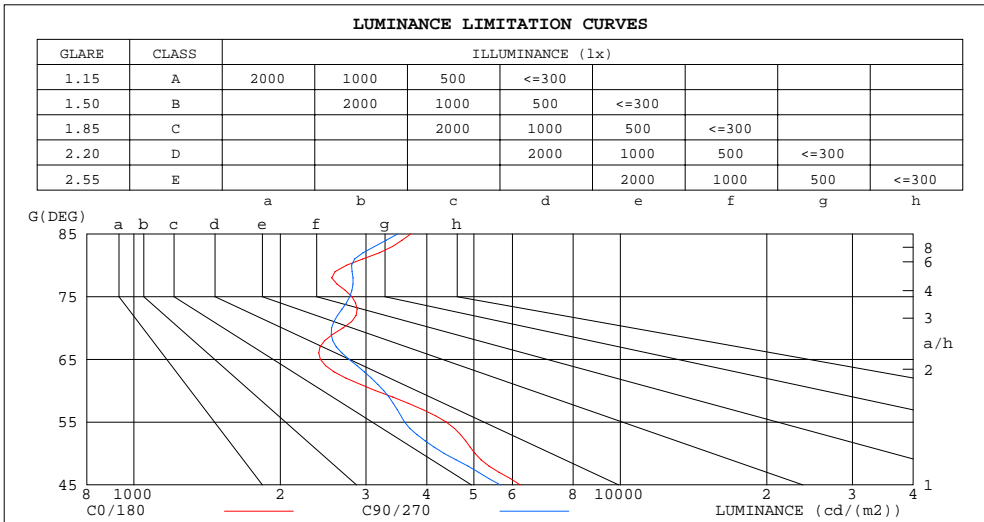
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φlum,lamp
10	1081	1080	1079	1077	1078	1077	1078	1079	0- 10	103.9	103.9	4.26,4.26
20	1025	1025	1022	1019	1018	1019	1020	1023	10- 20	297.6	401.5	16.5,16.5
30	925.3	923.3	917.6	915.0	914.5	915.4	917.4	922.8	20- 30	449.5	851.0	34.9,34.9
40	766.9	759.9	747.8	746.0	749.3	747.8	751.8	761.9	30- 40	527.2	1378	56.5,56.5
50	468.5	424.0	404.6	429.9	447.2	414.4	397.0	441.4	40- 50	460.3	1838	75.4,75.4
60	227.6	257.4	236.6	202.3	223.5	244.8	236.3	203.4	50- 60	288.8	2127	87.2,87.2
70	133.4	121.4	126.4	122.9	126.2	121.2	117.1	129.4	60- 70	162.3	2290	93.8,93.8
80	68.90	72.07	70.56	73.37	70.04	65.64	66.03	69.78	70- 80	103.8	2393	98.1,98.1
90	8.746	9.863	7.302	5.163	4.605	4.021	5.636	7.560	80- 90	46.40	2440	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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 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	3713	3489
80	2736	2802
75	2806	2779
70	2691	2550
65	2418	2769
60	3140	3263
55	4385	3602
50	5026	4341
45	6226	5671

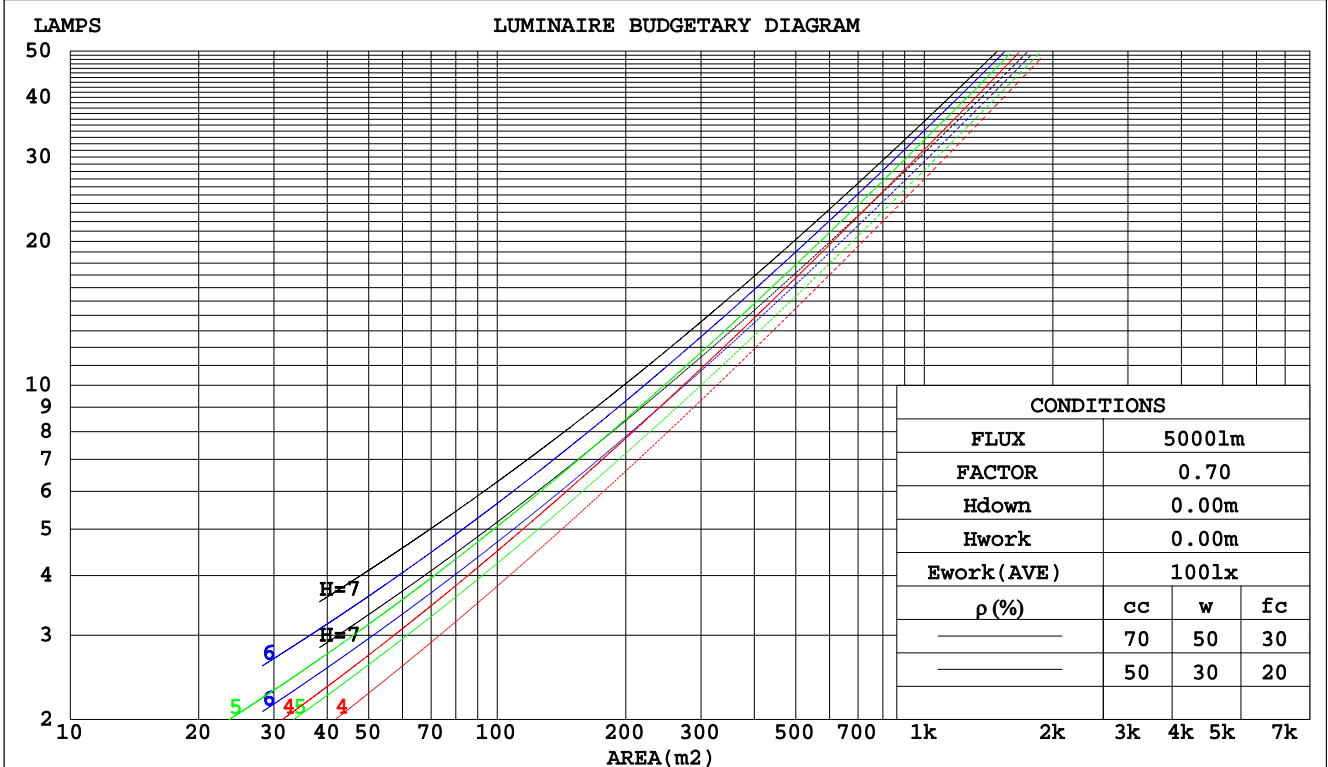
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2025-05-23

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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 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	.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	.39	.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	.39	.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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 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	.164	.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	.106	.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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 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	17.3	18.7	17.6	18.9	19.1	17.0	18.4	17.3	18.6	18.8
3H	18.1	19.4	18.4	19.6	19.8	17.6	18.9	17.9	19.1	19.4
4H	18.6	19.8	18.9	20.0	20.2	18.2	19.4	18.5	19.6	19.9
6H	18.9	20.0	19.2	20.3	20.5	18.6	19.8	19.0	20.0	20.3
8H	19.1	20.2	19.4	20.5	20.7	18.9	19.9	19.2	20.2	20.5
12H	19.3	20.4	19.7	20.7	20.9	19.1	20.1	19.4	20.4	20.7
4H 2H	17.6	18.8	17.9	19.0	19.3	17.3	18.5	17.6	18.7	19.0
3H	18.6	19.7	18.9	19.9	20.2	18.2	19.2	18.5	19.5	19.8
4H	19.2	20.2	19.6	20.5	20.8	18.9	19.9	19.3	20.2	20.5
6H	19.7	20.5	20.1	20.9	21.2	19.6	20.4	20.0	20.8	21.1
8H	20.0	20.8	20.4	21.1	21.5	19.9	20.7	20.3	21.0	21.4
12H	20.3	21.0	20.7	21.4	21.8	20.2	20.9	20.6	21.3	21.7
8H 4H	19.4	20.2	19.8	20.5	20.9	19.1	19.9	19.6	20.3	20.7
6H	20.0	20.7	20.5	21.1	21.5	20.0	20.7	20.5	21.1	21.5
8H	20.5	21.0	20.9	21.5	21.9	20.5	21.1	20.9	21.5	21.9
12H	21.0	21.5	21.4	21.9	22.4	20.9	21.4	21.4	21.9	22.4
12H 4H	19.4	20.1	19.8	20.5	20.9	19.2	19.9	19.6	20.3	20.7
6H	20.1	20.7	20.6	21.1	21.6	20.1	20.7	20.6	21.1	21.5
8H	20.6	21.1	21.1	21.6	22.0	20.6	21.1	21.1	21.6	22.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.5				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.8 / - 0.9					+ 0.7 / - 0.8				

CIE Pub.117, 2440 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 3.1)

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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

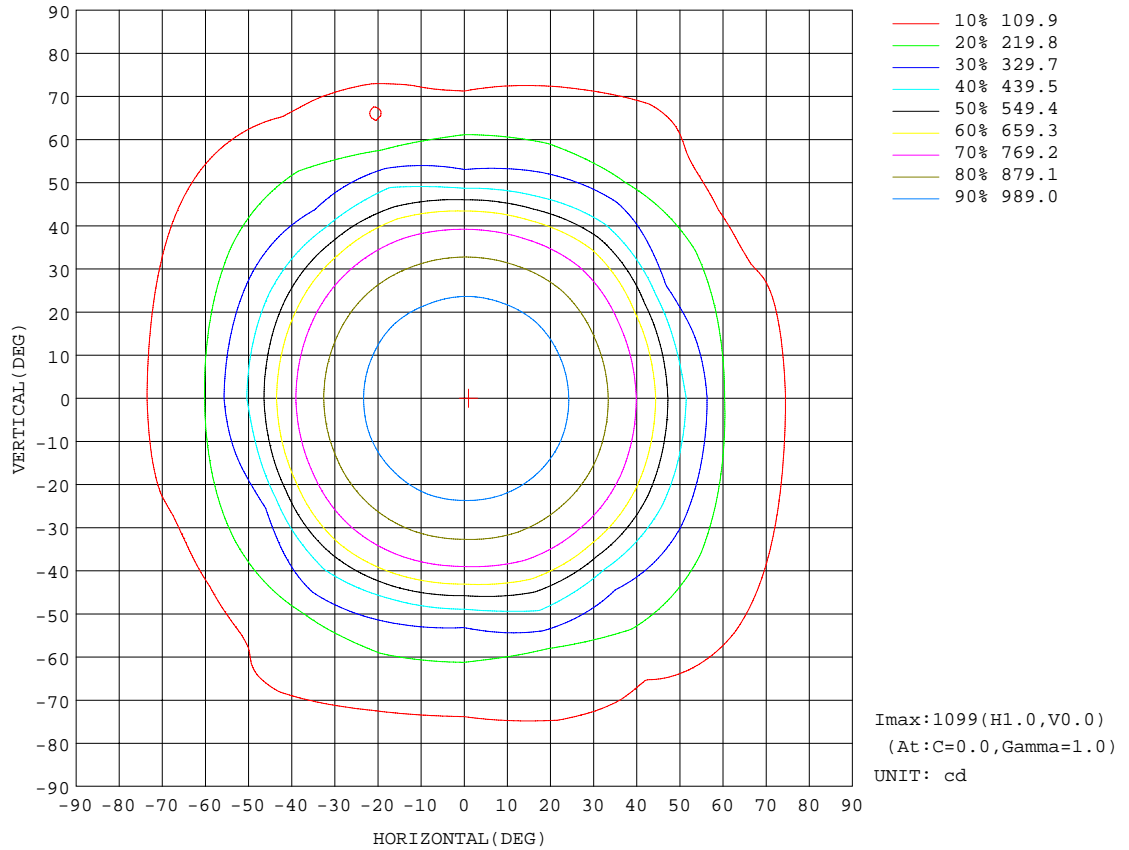
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	64	54	48	64	54	48	63	53	47	42
0.80	74	64	58	73	64	57	72	63	57	51
1.00	82	73	66	81	72	66	79	73	66	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	88	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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

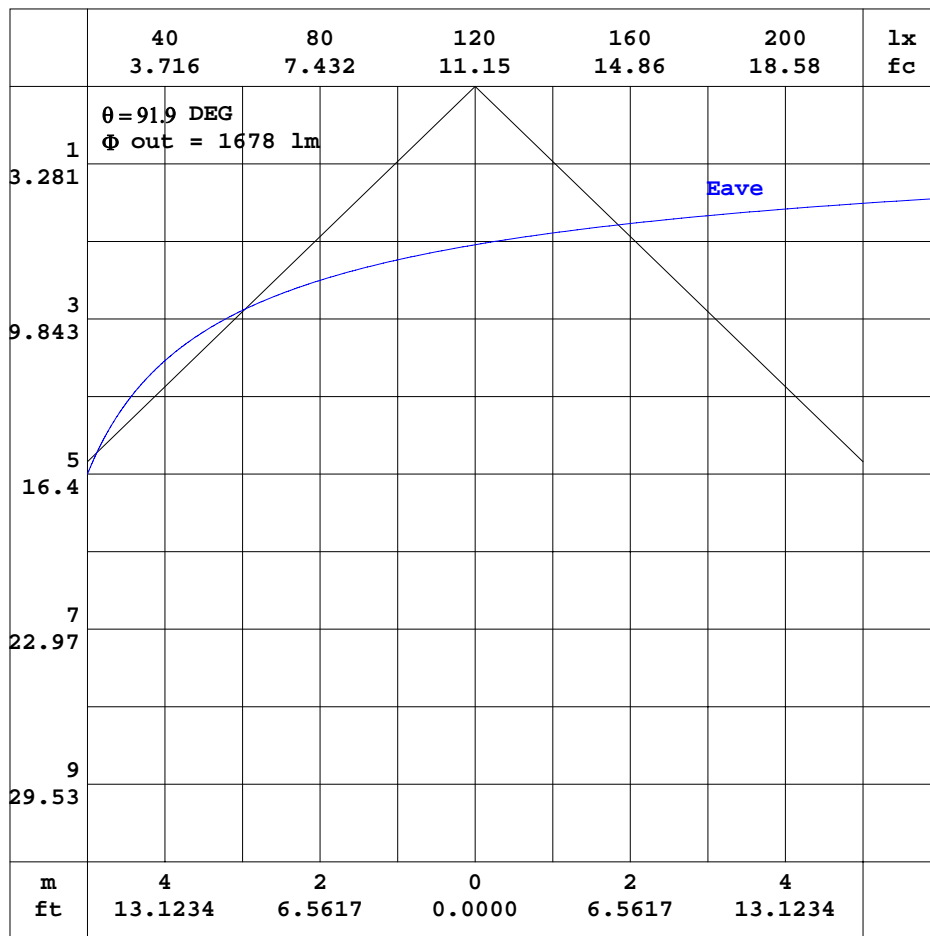


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2025-05-23

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:

AAI CURVES

Test:U:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:



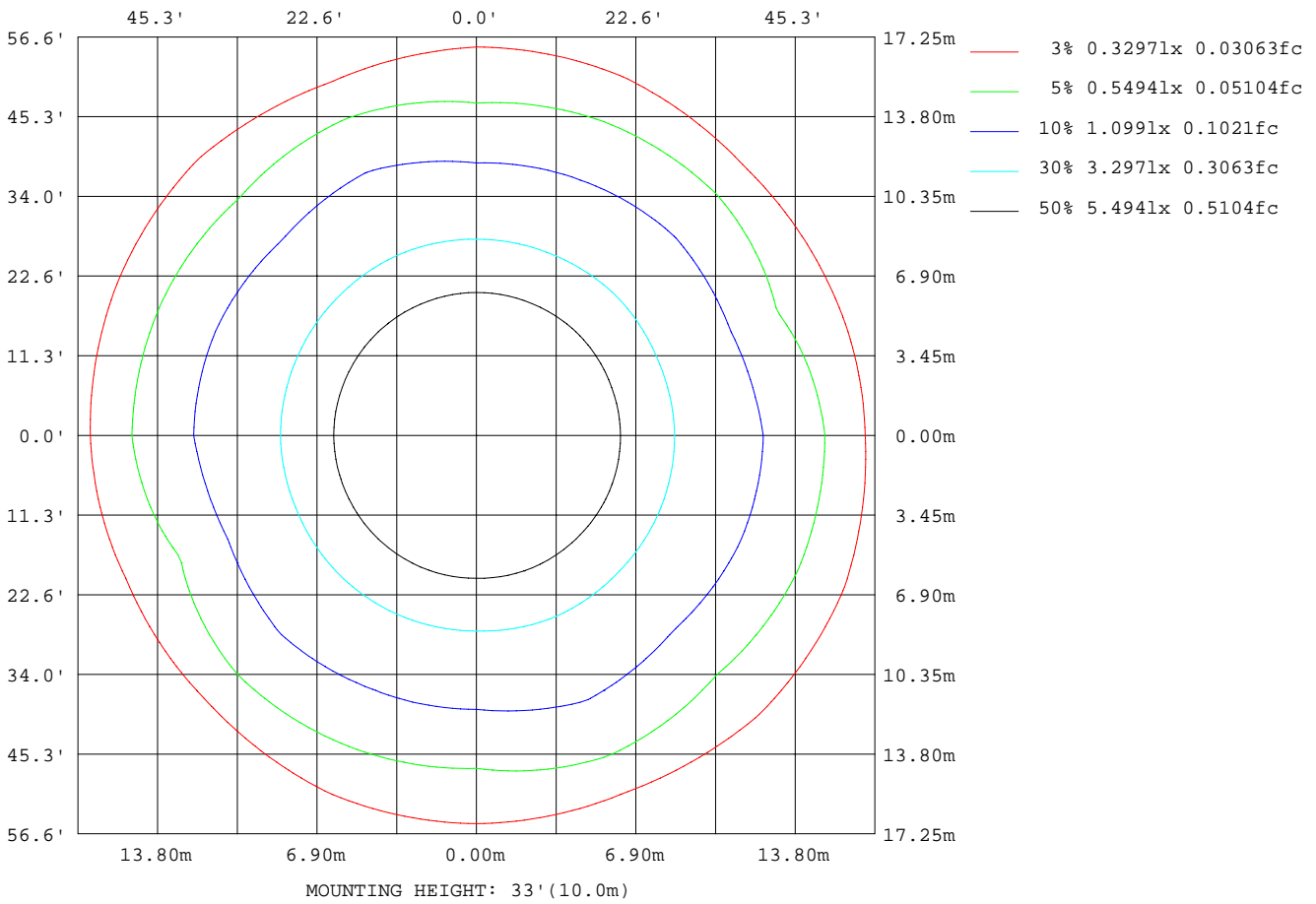
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 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:229.64V I:0.1225A P:27.798W PF:0.9880 Freq:49.99Hz Lamp Flux:2439.76x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.: 450*82	SERIAL No.:
MFR.:	SUR.:3.14*0.215*0.215	Shielding Angle:

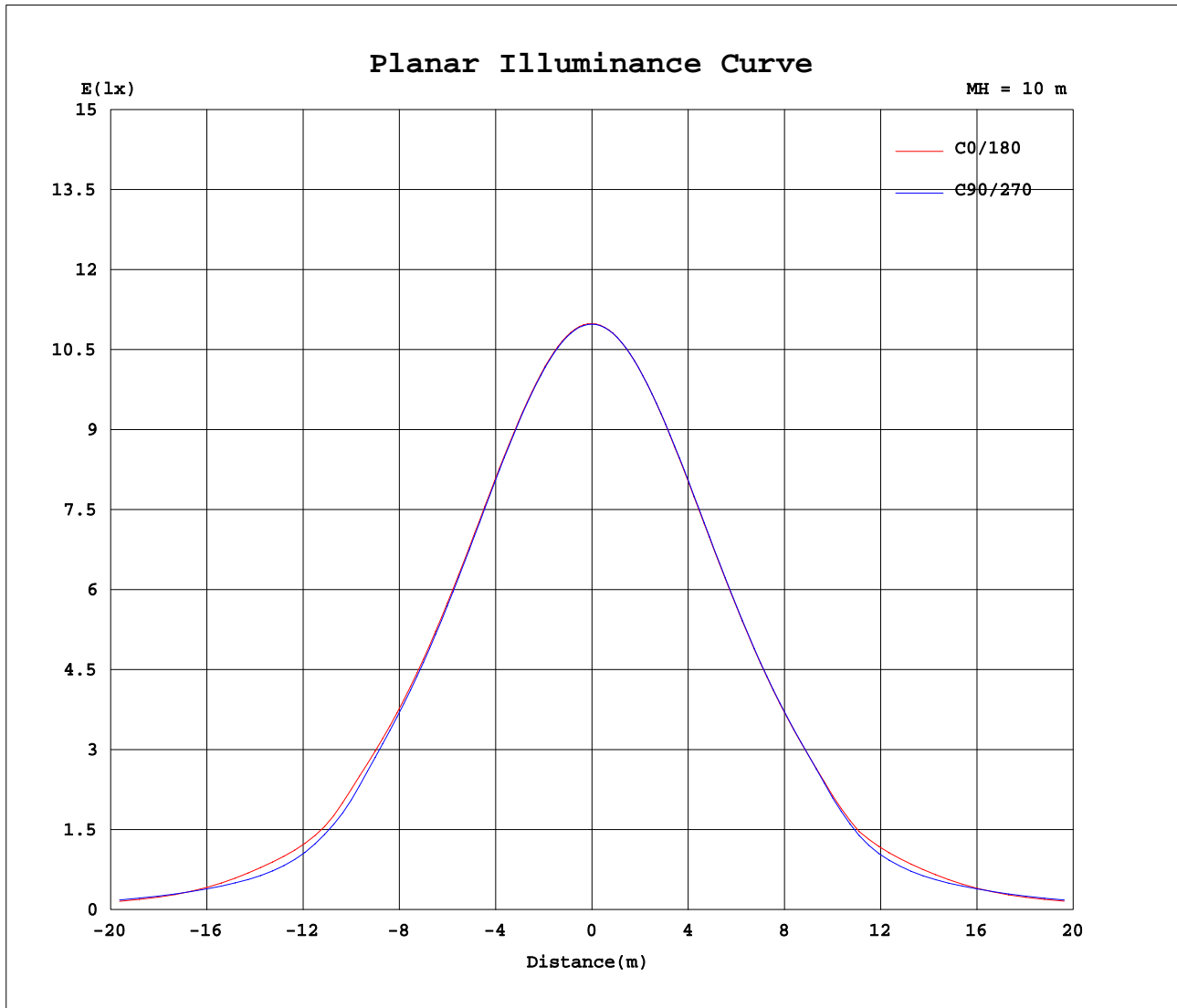
AvgL	cd/m2
L_0~180(65)av	2427
L_0~180(75)av	2695
L_0~180(85)av	3590
L_90~270(65)av	2748
L_90~270(75)av	2654
L_90~270(85)av	3441
L_45(65)av	2541
L_45(75)av	2707
L_45(85)av	3548

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:

