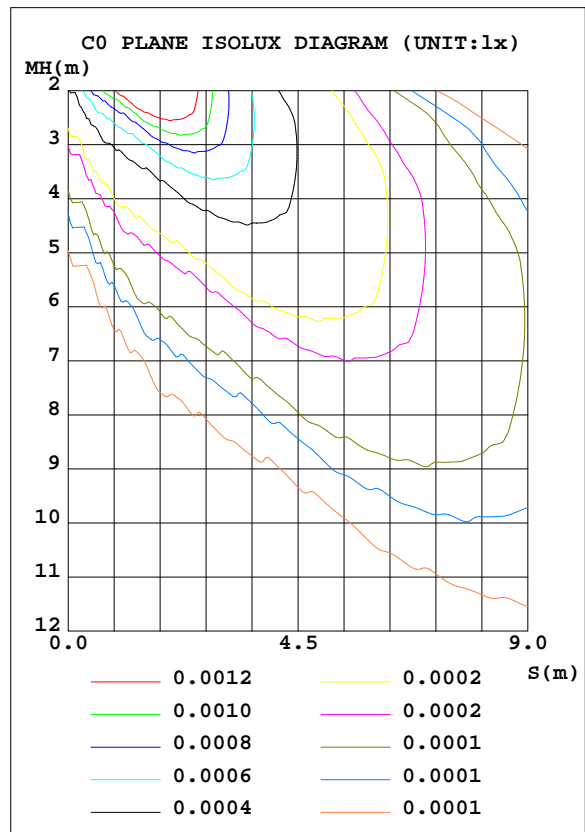
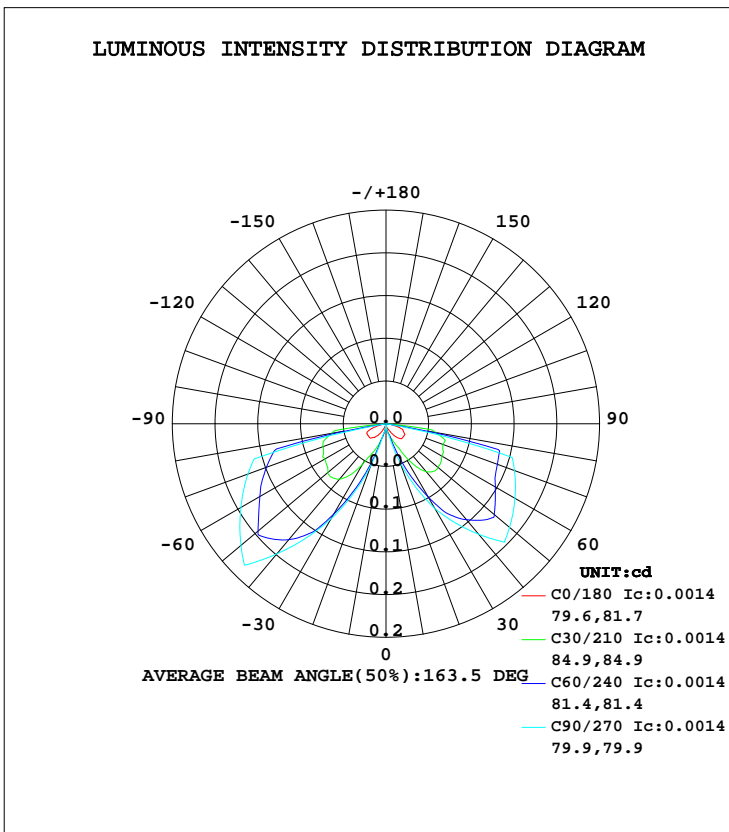


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 10.64 lm/W			
MODEL	489884-2700K	I <sub>max</sub> (cd)	0.1875	S/MH(C0/180)	4.43
NOMINAL POWER(W)	0.8	LOR(%)	4.0	S/MH(C90/270)	6.89
RATED VOLTAGE(V)	12	TOTAL FLUX(lm)	0.3973	η UP, DN(C0-180)	0.0,1.9
NOMINAL FLUX(lm)	10	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,2.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	12	η down(%)	4.0	CIBSE SHR MAX	1.05



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

**ZONAL FLUX DIAGRAM**

**ZONAL FLUX DIAGRAM:**

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
5	0.0018	0.0038	0.0046	0.0034	0.0011	0.0033	0.0043	0.0035	0- 5	0.0001	0.0001	0.02,0.00
10	0.0029	0.0065	0.0078	0.0060	0.0013	0.0075	0.0072	0.0058	5- 10	0.0003	0.0004	0.10,0.00
15	0.0038	0.0093	0.0110	0.0106	0.0027	0.0148	0.0101	0.0088	10- 15	0.0009	0.0013	0.33,0.01
20	0.0051	0.0159	0.0379	0.0180	0.0029	0.0241	0.0408	0.0142	15- 20	0.0025	0.0038	0.97,0.04
25	0.0065	0.0372	0.0647	0.0421	0.0054	0.0502	0.0715	0.0380	20- 25	0.0066	0.0104	2.63,0.10
30	0.0099	0.0605	0.0916	0.0671	0.0092	0.0774	0.1022	0.0645	25- 30	0.0128	0.0233	5.85,0.23
35	0.0136	0.0827	0.1133	0.0905	0.0135	0.1028	0.1307	0.0876	30- 35	0.0205	0.0438	11,0.44
40	0.0172	0.0995	0.1351	0.1052	0.0170	0.1199	0.1591	0.1044	35- 40	0.0284	0.0722	18.2,0.72
45	0.0201	0.1006	0.1568	0.1032	0.0186	0.1179	0.1875	0.1074	40- 45	0.0356	0.1078	27.1,1.08
50	0.0203	0.1002	0.1510	0.1002	0.0201	0.1146	0.1773	0.1087	45- 50	0.0407	0.1485	37.4,1.49
55	0.0203	0.0992	0.1452	0.0977	0.0201	0.1115	0.1670	0.1100	50- 55	0.0425	0.1910	48.1,1.91
60	0.0204	0.0926	0.1394	0.0926	0.0202	0.1047	0.1568	0.0992	55- 60	0.0429	0.2339	58.9,2.34
65	0.0182	0.0881	0.1337	0.0916	0.0195	0.1010	0.1472	0.0929	60- 65	0.0429	0.2768	69.7,2.77
70	0.0170	0.0854	0.1280	0.0875	0.0155	0.0965	0.1375	0.0865	65- 70	0.0425	0.3193	80.4,3.19
75	0.0116	0.0832	0.1223	0.0777	0.0080	0.0898	0.1279	0.0825	70- 75	0.0414	0.3608	90.8,3.61
80	0.0036	0.0654	0	0.0554	0.0002	0.0682	0	0.0633	75- 80	0.0300	0.3908	98.4,3.91
85	0	0	0	0	0	0	0	0	80- 85	0.0062	0.3970	99.9,3.97
90	0	0	0	0	0	0	0	0	85- 90	0.0003	0.3973	100,3.97
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

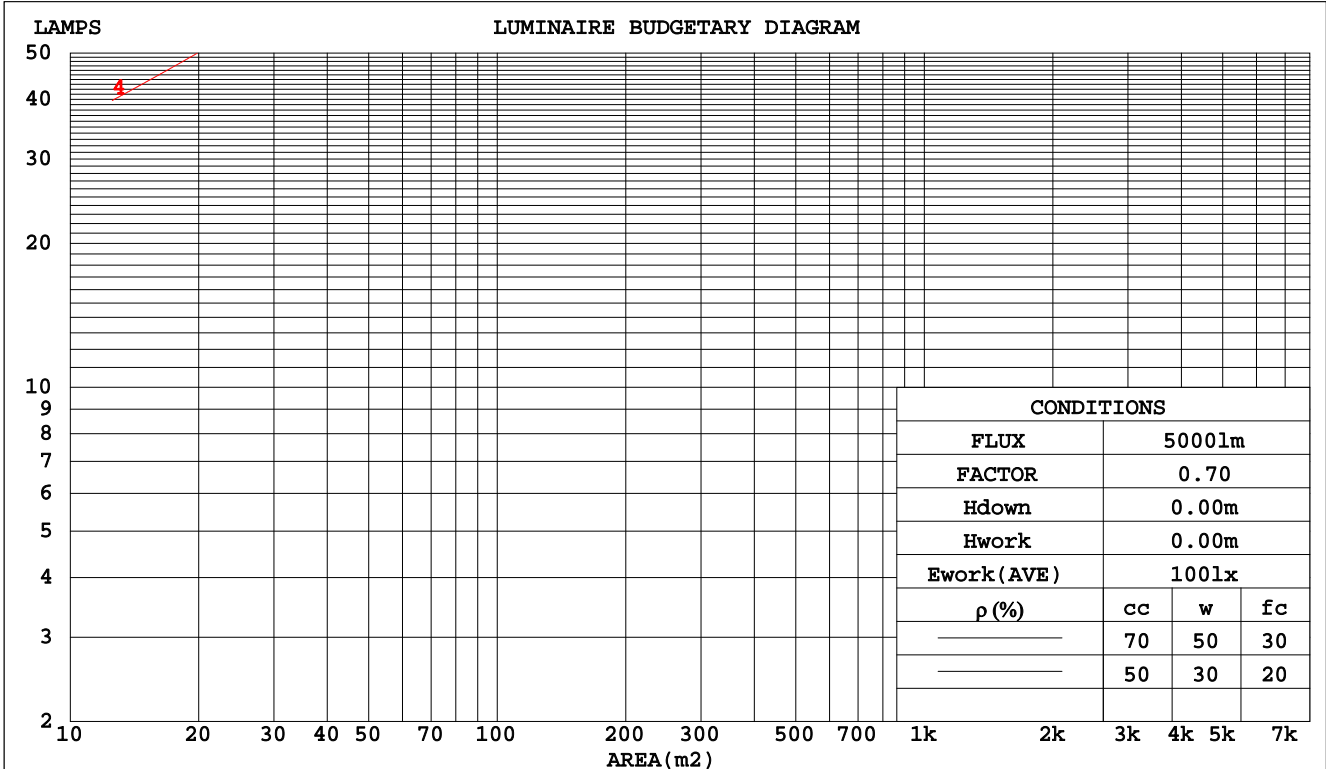
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	.05	.05	.05	.05	.05	.05	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
1.0	.04	.04	.04	.04	.04	.03	.04	.03	.03	.04	.03	.03	.03	.03	.03	.03
2.0	.03	.03	.03	.03	.03	.03	.03	.03	.02	.03	.03	.02	.03	.03	.02	.02
3.0	.03	.02	.02	.03	.02	.02	.03	.02	.02	.02	.02	.02	.02	.02	.02	.02
4.0	.02	.02	.02	.02	.02	.02	.02	.02	.01	.02	.02	.01	.02	.02	.01	.01
5.0	.02	.02	.01	.02	.02	.01	.02	.01	.01	.02	.01	.01	.02	.01	.01	.01
6.0	.02	.01	.01	.02	.01	.01	.02	.01	.01	.02	.01	.01	.01	.01	.01	.01
7.0	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
8.0	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
9.0	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.00
10.0	.01	.01	.00	.01	.01	.00	.01	.01	.00	.01	.01	.00	.01	.01	.00	.00



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION 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	.016	.009	.003	.016	.009	.003	.015	.009	.003	.015	.008	.003	.014	.008	.003	
2.0	.015	.008	.003	.015	.008	.003	.014	.008	.002	.014	.008	.002	.013	.008	.002	
3.0	.014	.007	.002	.013	.007	.002	.013	.007	.002	.013	.007	.002	.012	.007	.002	
4.0	.012	.006	.002	.012	.006	.002	.012	.006	.002	.011	.006	.002	.011	.006	.002	
5.0	.011	.006	.002	.011	.006	.002	.011	.006	.002	.010	.005	.002	.010	.005	.002	
6.0	.010	.005	.001	.010	.005	.001	.010	.005	.001	.009	.005	.001	.009	.005	.001	
7.0	.009	.005	.001	.009	.005	.001	.009	.005	.001	.009	.004	.001	.008	.004	.001	
8.0	.009	.004	.001	.008	.004	.001	.008	.004	.001	.008	.004	.001	.008	.004	.001	
9.0	.008	.004	.001	.008	.004	.001	.008	.004	.001	.007	.004	.001	.007	.004	.001	
10.0	.007	.004	.001	.007	.004	.001	.007	.003	.001	.007	.003	.001	.007	.003	.001	

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	.008	.008	.008	.006	.006	.006	.004	.004	.004	.003	.003	.003	.001	.001	.001	
1.0	.007	.006	.005	.006	.005	.004	.004	.004	.003	.002	.002	.002	.001	.001	.001	
2.0	.007	.005	.003	.006	.004	.003	.004	.003	.002	.002	.002	.001	.001	.001	.000	
3.0	.007	.005	.003	.006	.004	.002	.004	.003	.002	.002	.002	.001	.001	.001	.000	
4.0	.007	.004	.002	.006	.004	.002	.004	.002	.001	.002	.001	.001	.001	.000	.000	
5.0	.007	.004	.002	.006	.003	.001	.004	.002	.001	.002	.001	.001	.001	.000	.000	
6.0	.006	.003	.001	.005	.003	.001	.004	.002	.001	.002	.001	.000	.001	.000	.000	
7.0	.006	.003	.001	.005	.003	.001	.004	.002	.001	.002	.001	.000	.001	.000	.000	
8.0	.006	.003	.001	.005	.002	.001	.003	.002	.001	.002	.001	.000	.001	.000	.000	
9.0	.005	.003	.001	.005	.002	.001	.003	.002	.001	.002	.001	.000	.001	.000	.000	
10.0	.005	.003	.001	.004	.002	.001	.003	.002	.000	.002	.001	.000	.001	.000	.000	

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm										
NAME: 489884-2700K					TYPE:489884-2700K			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:			PROTECTION 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	-15.6	-13.7	-15.3	-13.5	-13.2	-8.2	-6.3	-7.9	-6.1	-5.9
3H	-14.1	-12.3	-13.8	-12.1	-11.8	-5.1	-3.3	-4.8	-3.1	-2.8
4H	-13.4	-11.8	-13.1	-11.5	-11.2	-3.4	-1.7	-3.1	-1.4	-1.2
6H	-13.1	-11.6	-12.8	-11.3	-11.0	-3.1	-1.5	-2.7	-1.2	-0.9
8H	-13.1	-11.6	-12.8	-11.3	-11.0	-3.2	-1.6	-2.8	-1.3	-1.0
12H	-13.2	-11.7	-12.8	-11.4	-11.1	-3.2	-1.7	-2.8	-1.4	-1.1
4H 2H	-12.1	-10.5	-11.8	-10.2	-9.9	-7.8	-6.1	-7.4	-5.8	-5.5
3H	-10.3	-8.8	-9.9	-8.5	-8.2	-4.3	-2.8	-3.9	-2.5	-2.2
4H	-9.4	-8.1	-9.0	-7.7	-7.4	-2.3	-1.0	-1.9	-0.6	-0.3
6H	-8.9	-7.7	-8.5	-7.3	-6.9	-2.0	-0.7	-1.5	-0.4	0.0
8H	-8.8	-7.7	-8.4	-7.3	-6.9	-2.0	-0.9	-1.6	-0.5	-0.1
12H	-8.8	-7.8	-8.4	-7.4	-7.0	-2.0	-1.0	-1.6	-0.6	-0.2
8H 4H	-6.9	-5.7	-6.4	-5.4	-5.0	-2.0	-0.8	-1.5	-0.4	-0.0
6H	-5.8	-4.8	-5.4	-4.4	-4.0	-1.5	-0.5	-1.0	-0.1	0.3
8H	-5.4	-4.6	-5.0	-4.2	-3.7	-1.5	-0.6	-1.0	-0.2	0.2
12H	-5.3	-4.5	-4.8	-4.1	-3.6	-1.5	-0.8	-1.0	-0.3	0.1
12H 4H	-6.7	-5.7	-6.3	-5.3	-4.9	-1.9	-0.9	-1.5	-0.5	-0.1
6H	-5.6	-4.7	-5.1	-4.3	-3.8	-1.4	-0.6	-0.9	-0.1	0.3
8H	-5.2	-4.4	-4.7	-4.0	-3.5	-1.4	-0.7	-1.0	-0.3	0.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.0 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.3 / - 0.3					+ 0.4 / - 0.4				
2.0H	+ 0.1 / - 0.3					+ 0.5 / - 0.7				

CIE Pub.117 Corrected 10.00 lm Total Lamp Luminous Flux. (8log(F/F0) = -16.0)

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

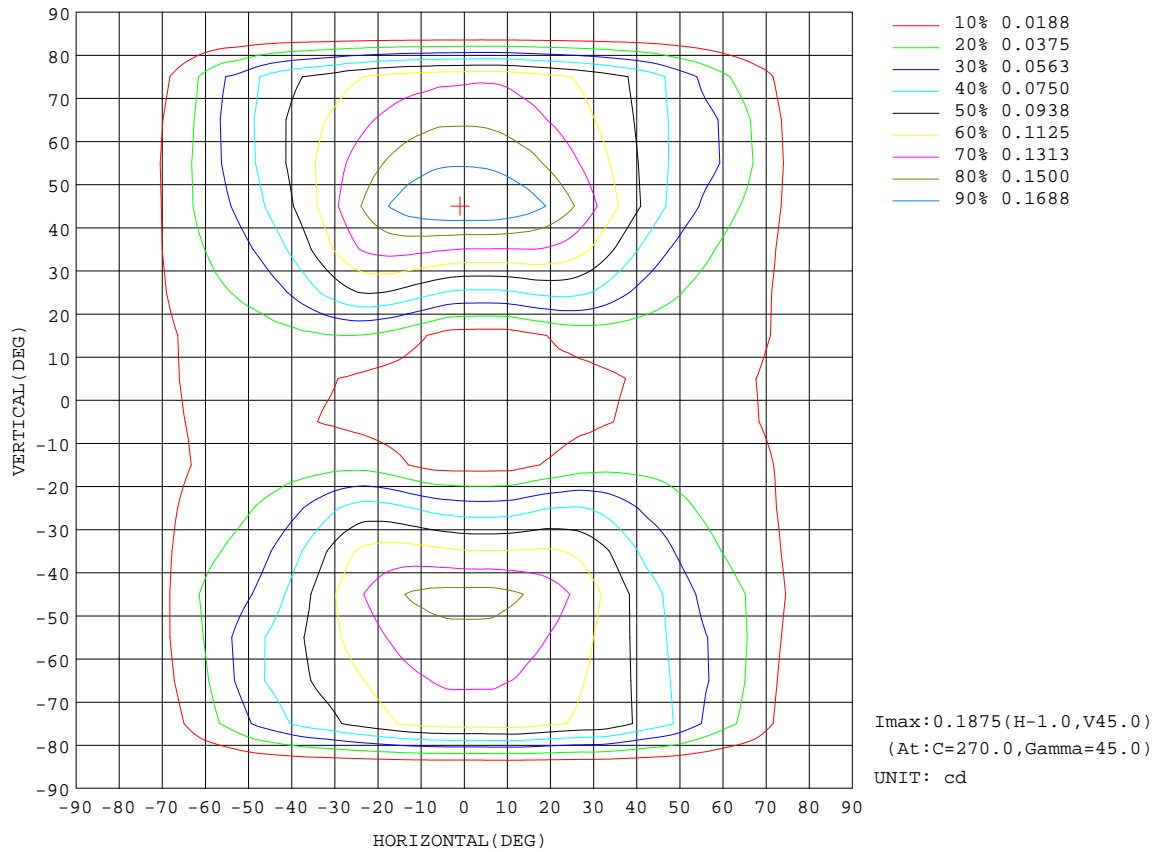
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	2	1	1	2	1	1	2	1	1	0
0.80	2	2	1	2	1	1	2	1	1	1
1.00	2	2	2	2	2	1	2	2	1	1
1.25	3	2	2	3	2	2	3	2	2	1
1.50	3	3	2	3	2	2	3	2	2	2
2.00	3	3	3	3	3	3	3	3	3	2
2.50	4	3	3	4	3	3	3	3	3	2
3.00	4	3	3	4	3	3	4	3	3	3
4.00	4	4	3	4	4	3	4	4	3	3
5.00	4	4	4	4	4	4	4	4	4	3
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

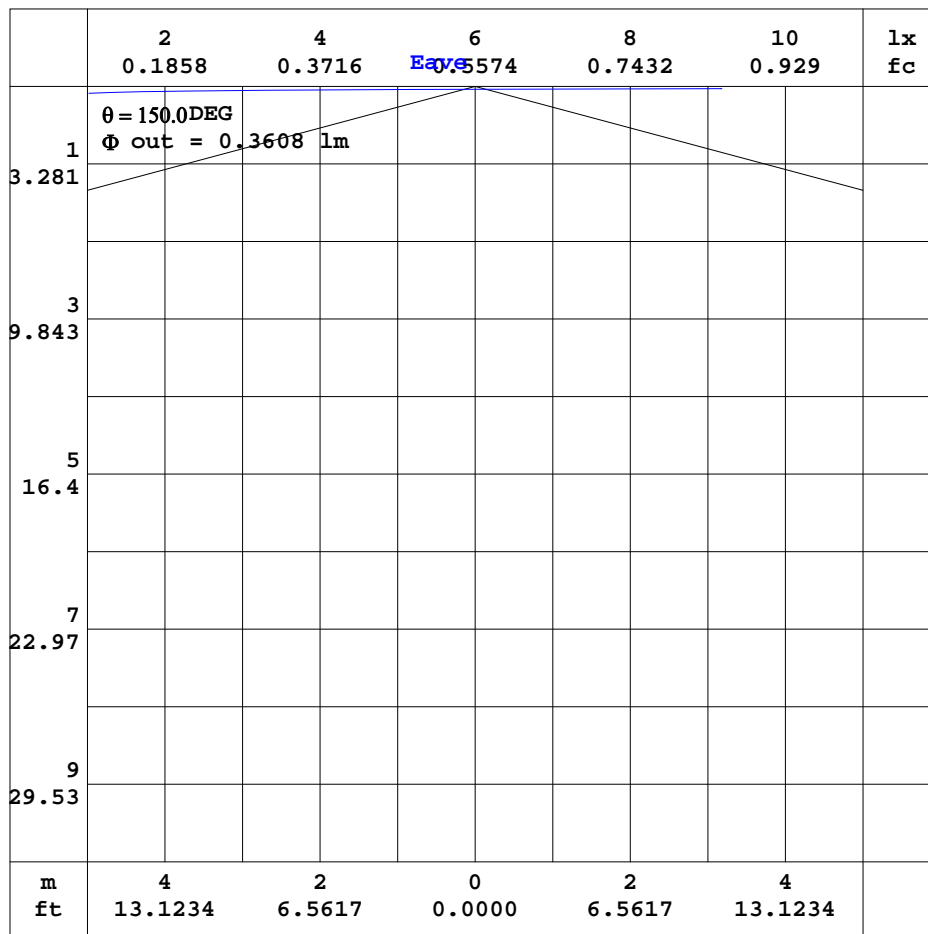


C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 20DEG  
 Operators: Y  
 Test Date: 2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity: 65.0%  
 Test Distance: 8.750m [K=1.0000]  
 Remarks:

AAI CURVES

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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

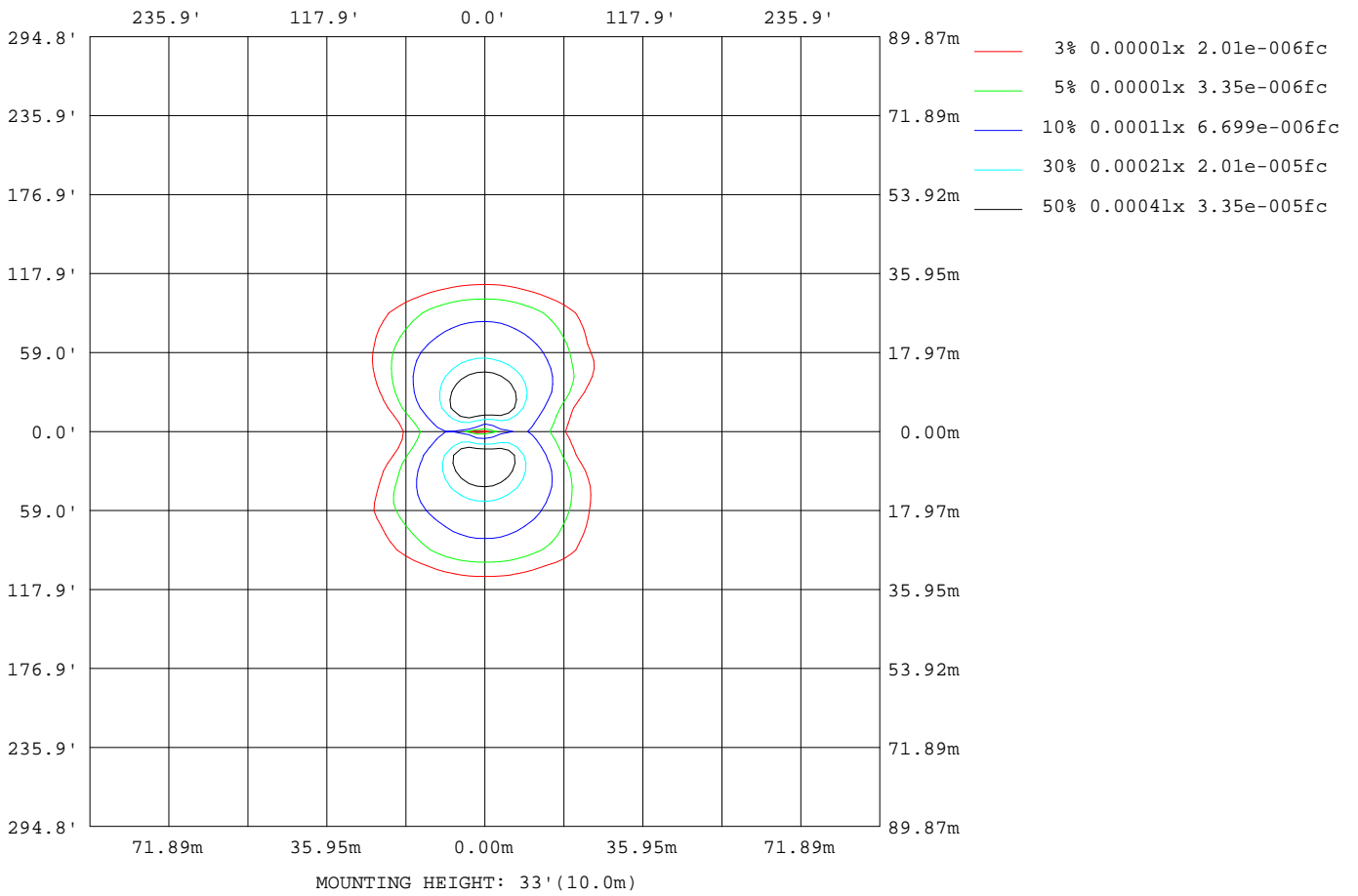
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:



## ISOLUX DIAGRAM

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:11.96V I:0.1349A P:0.8770W PF:0.5433 Lamp Flux:235x1 lm		
NAME: 489884-2700K	TYPE:489884-2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

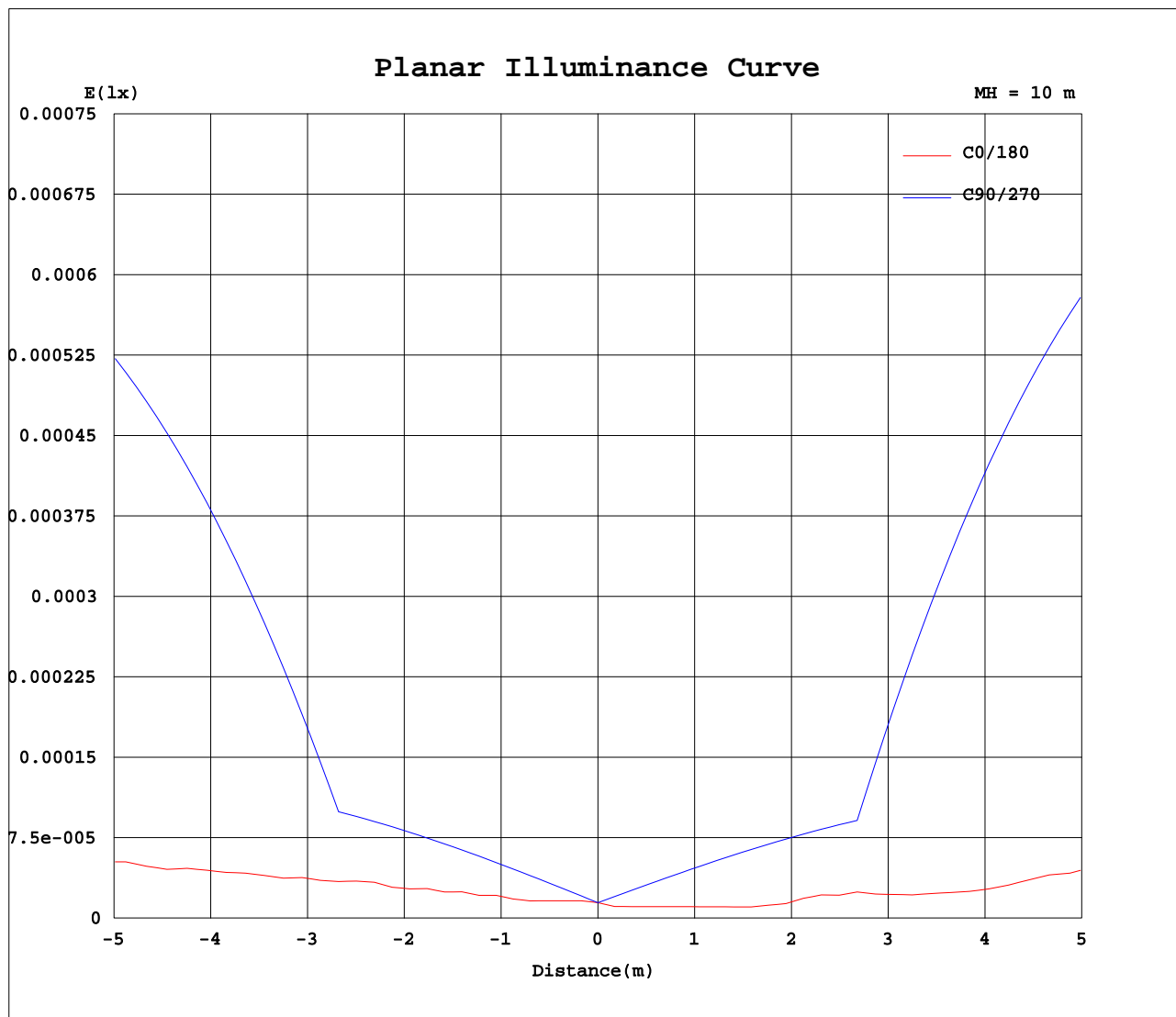
AvgL	cd/m2
L_0~180(65)av	0
L_0~180(75)av	0
L_0~180(85)av	0
L_90~270(65)av	2
L_90~270(75)av	2
L_90~270(85)av	0
L_45(65)av	1
L_45(75)av	2
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:20DEG  
Operators:Y  
Test Date:2023-11-30

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
Humidity:65.0%  
Test Distance:8.750m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 20DEG  
 Operators: Y  
 Test Date: 2023-11-30

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity: 65.0%  
 Test Distance: 8.750m [K=1.0000]  
 Remarks:







