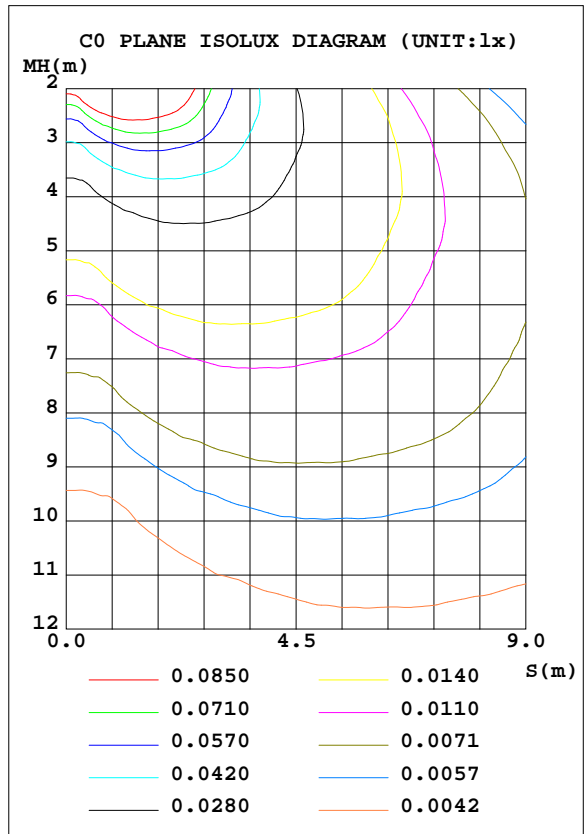
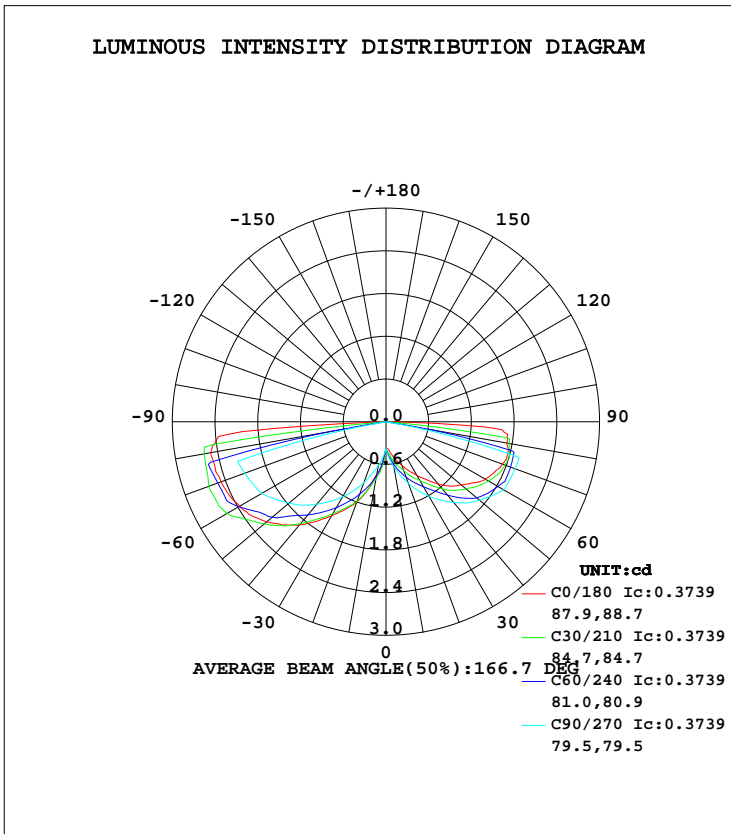


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 46.98 lm/W			
MODEL	490923 ST14-12V-1W	I <sub>max</sub> (cd)	2.662	S/MH(C0/180)	3.97
NOMINAL POWER(W)	1	LOR(%)	18.4	S/MH(C90/270)	3.74
RATED VOLTAGE(V)	12	TOTAL FLUX(lm)	9.2206	η UP, DN(C0-180)	0.0,9.1
NOMINAL FLUX(lm)	50	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,9.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	12	η down(%)	18.4	CIBSE SHR MAX	1.75



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:20DEG  
Operators:Y  
Test Date:2024-04-25

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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
5	0.3867	0.4689	0.5079	0.6045	0.6100	0.6092	0.5004	0.4447	0- 5	0.0111	0.0111	0.12,0.02
10	0.4689	0.5773	0.6419	0.7823	0.7557	0.8107	0.6269	0.4917	5- 10	0.0424	0.0536	0.58,0.11
15	0.5619	0.6836	0.7759	0.9180	0.9867	0.9724	0.7534	0.5625	10- 15	0.0851	0.1387	1.5,0.28
20	0.6514	0.7479	0.9198	1.066	1.198	1.112	0.9084	0.7014	15- 20	0.1404	0.2791	3.03,0.56
25	0.7589	0.8670	1.064	1.223	1.362	1.294	1.063	0.7873	20- 25	0.2073	0.4863	5.27,0.97
30	0.8700	1.021	1.208	1.380	1.526	1.471	1.218	0.8851	25- 30	0.2842	0.7705	8.36,1.54
35	0.9930	1.139	1.343	1.555	1.708	1.631	1.365	1.049	30- 35	0.3716	1.142	12.4,2.28
40	1.143	1.254	1.479	1.731	1.892	1.774	1.512	1.258	35- 40	0.4707	1.613	17.5,3.23
45	1.279	1.408	1.614	1.867	2.053	1.947	1.659	1.378	40- 45	0.5778	2.191	23.8,4.38
50	1.379	1.537	1.714	2.003	2.190	2.132	1.778	1.520	45- 50	0.6849	2.875	31.2,5.75
55	1.496	1.650	1.813	2.138	2.303	2.321	1.897	1.700	50- 55	0.7895	3.665	39.7,7.33
60	1.613	1.712	1.913	2.249	2.371	2.462	2.016	1.743	55- 60	0.8904	4.555	49.4,9.11
65	1.682	1.768	1.921	2.291	2.434	2.603	2.063	1.804	60- 65	0.9776	5.533	60,11.1
70	1.736	1.808	1.929	2.316	2.466	2.630	2.111	1.857	65- 70	1.042	6.574	71.3,13.1
75	1.772	1.804	1.937	2.311	2.484	2.609	2.159	1.845	70- 75	1.087	7.662	83.1,15.3
80	1.726	1.438	0	1.839	2.496	2.072	0	1.503	75- 80	0.9522	8.614	93.4,17.2
85	1.664	0	0	0	2.357	0	0	0	80- 85	0.4861	9.100	98.7,18.2
90	0	0	0	0	0	0	0	0	85- 90	0.1207	9.221	100,18.4
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			

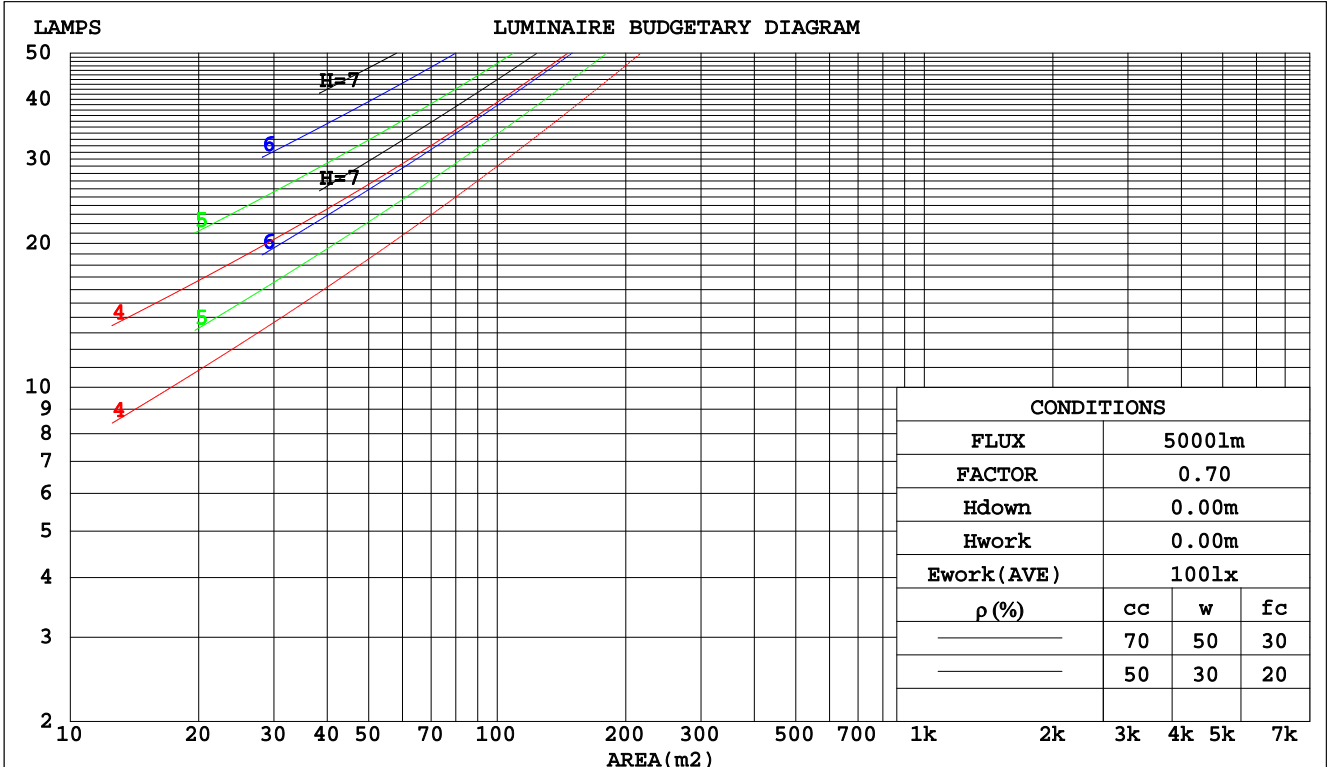
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2024-04-25

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:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	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	.22	.22	.22	.21	.21	.21	.20	.20	.20	.20	.20	.20	.19	.19	.19	.18
1.0	.18	.16	.15	.17	.16	.15	.16	.15	.15	.16	.15	.14	.15	.14	.14	.13
2.0	.14	.13	.11	.14	.12	.11	.13	.12	.11	.13	.11	.10	.12	.11	.10	.10
3.0	.12	.10	.08	.12	.10	.08	.11	.09	.08	.10	.09	.08	.10	.09	.08	.07
4.0	.10	.08	.06	.10	.08	.06	.09	.08	.06	.09	.07	.06	.08	.07	.06	.05
5.0	.09	.07	.05	.09	.07	.05	.08	.06	.05	.08	.06	.05	.07	.06	.05	.04
6.0	.08	.06	.04	.07	.06	.04	.07	.05	.04	.07	.05	.04	.06	.05	.04	.04
7.0	.07	.05	.03	.07	.05	.03	.06	.05	.03	.06	.05	.03	.06	.04	.03	.03
8.0	.06	.04	.03	.06	.04	.03	.06	.04	.03	.05	.04	.03	.05	.04	.03	.02
9.0	.06	.04	.03	.05	.04	.03	.05	.04	.03	.05	.04	.02	.05	.03	.02	.02
10.0	.05	.03	.02	.05	.03	.02	.05	.03	.02	.05	.03	.02	.04	.03	.02	.02



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2024-04-25

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:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	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	.087	.049	.016	.085	.049	.015	.083	.047	.015	.080	.046	.015	.078	.045	.015	
2.0	.076	.042	.013	.075	.041	.013	.073	.040	.013	.071	.040	.012	.069	.039	.012	
3.0	.067	.036	.011	.066	.035	.011	.064	.035	.011	.062	.034	.010	.060	.033	.010	
4.0	.060	.031	.009	.059	.031	.009	.057	.030	.009	.055	.030	.009	.053	.029	.009	
5.0	.053	.027	.008	.052	.027	.008	.051	.026	.008	.049	.026	.008	.048	.026	.008	
6.0	.048	.024	.007	.047	.024	.007	.046	.024	.007	.045	.023	.007	.043	.023	.007	
7.0	.044	.022	.006	.043	.022	.006	.042	.021	.006	.041	.021	.006	.040	.021	.006	
8.0	.040	.020	.006	.040	.020	.006	.039	.019	.005	.037	.019	.005	.036	.019	.005	
9.0	.037	.018	.005	.037	.018	.005	.036	.018	.005	.035	.017	.005	.034	.017	.005	
10.0	.035	.017	.005	.034	.016	.005	.033	.016	.005	.032	.016	.005	.031	.016	.005	

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	.035	.035	.035	.030	.030	.030	.020	.020	.020	.012	.012	.012	.004	.004	.004	
1.0	.035	.029	.022	.030	.024	.019	.021	.017	.013	.012	.010	.008	.004	.003	.003	
2.0	.035	.024	.015	.030	.021	.013	.020	.014	.009	.012	.008	.005	.004	.003	.002	
3.0	.034	.021	.011	.029	.018	.010	.020	.013	.007	.011	.007	.004	.004	.002	.001	
4.0	.032	.019	.009	.028	.016	.008	.019	.011	.005	.011	.007	.003	.004	.002	.001	
5.0	.031	.017	.007	.026	.015	.006	.018	.010	.004	.011	.006	.003	.003	.002	.001	
6.0	.029	.016	.006	.025	.014	.005	.017	.010	.004	.010	.006	.002	.003	.002	.001	
7.0	.028	.014	.005	.024	.013	.004	.016	.009	.003	.010	.005	.002	.003	.002	.001	
8.0	.026	.013	.005	.023	.012	.004	.016	.008	.003	.009	.005	.002	.003	.002	.001	
9.0	.025	.012	.004	.021	.011	.004	.015	.008	.003	.009	.004	.001	.003	.001	.000	
10.0	.024	.012	.004	.020	.010	.003	.014	.007	.002	.008	.004	.001	.003	.001	.000	

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:20DEG  
 Operators:Y  
 Test Date:2024-04-25

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:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm										
NAME: 490923 ST14-12V-1W					TYPE:490923 ST14-12V-1W			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	-1.8	0.1	-1.5	0.3	0.6	-0.9	1.0	-0.7	1.2	1.5
3H	1.8	3.6	2.1	3.8	4.1	2.6	4.4	2.9	4.6	4.9
4H	3.8	5.5	4.1	5.8	6.1	4.5	6.2	4.8	6.5	6.8
6H	5.9	7.5	6.2	7.8	8.1	4.8	6.5	5.2	6.7	7.1
8H	7.0	8.7	7.4	9.0	9.3	4.7	6.3	5.1	6.6	7.0
12H	8.4	9.9	8.7	10.2	10.6	4.7	6.2	5.0	6.5	6.9
4H 2H	-0.4	1.3	-0.1	1.6	1.9	0.1	1.9	0.5	2.1	2.4
3H	3.2	4.8	3.6	5.1	5.4	3.8	5.4	4.2	5.7	6.0
4H	5.3	6.7	5.7	7.1	7.4	5.8	7.3	6.2	7.6	8.0
6H	7.5	8.9	8.0	9.2	9.6	6.2	7.5	6.6	7.9	8.3
8H	8.8	10.0	9.2	10.4	10.8	6.2	7.4	6.6	7.8	8.2
12H	10.2	11.4	10.7	11.8	12.2	6.1	7.3	6.6	7.7	8.1
8H 4H	6.2	7.4	6.6	7.8	8.2	6.6	7.8	7.0	8.2	8.6
6H	8.7	9.8	9.2	10.2	10.6	7.1	8.1	7.5	8.5	9.0
8H	10.1	11.1	10.6	11.5	12.0	7.0	8.0	7.5	8.4	8.9
12H	11.8	12.6	12.2	13.0	13.5	7.0	7.8	7.5	8.3	8.8
12H 4H	6.2	7.4	6.6	7.8	8.2	6.8	8.0	7.3	8.4	8.8
6H	8.8	9.7	9.2	10.1	10.6	7.3	8.3	7.8	8.7	9.2
8H	10.2	11.1	10.7	11.5	12.0	7.3	8.1	7.8	8.6	9.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.3 / - 0.3					+ 0.4 / - 0.4				
2.0H	+ 0.3 / - 0.4					+ 0.6 / - 0.8				

CIE Pub.117 Corrected 50.00 lm Total Lamp Luminous Flux. (8log(F/F0) = -10.4)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:20DEG  
Operators:Y  
Test Date:2024-04-25

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:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

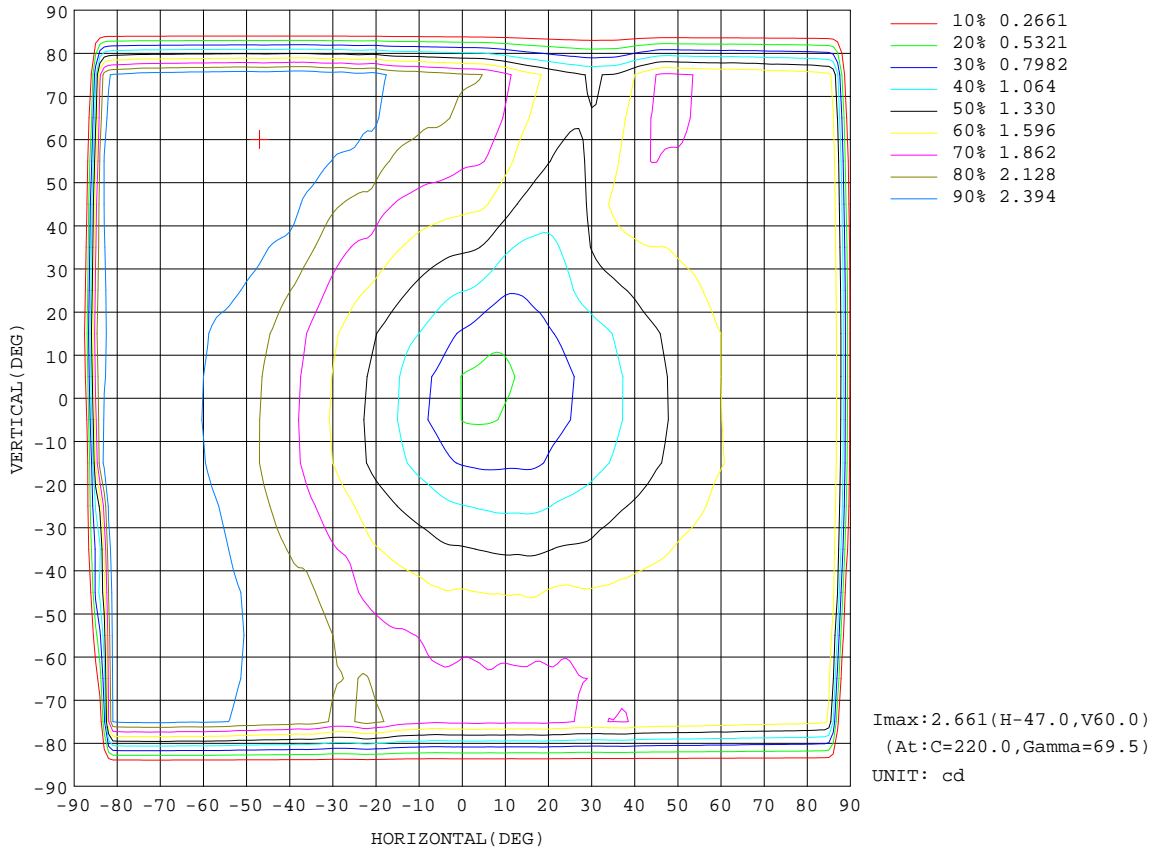
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	8	5	4	8	5	4	8	5	4	2
0.80	10	7	5	9	7	5	9	7	5	3
1.00	11	8	7	11	8	6	10	9	6	5
1.25	12	10	8	12	10	8	12	9	8	6
1.50	14	11	9	13	11	9	13	10	9	7
2.00	15	13	11	15	13	11	14	12	11	9
2.50	16	14	12	16	14	12	15	13	12	10
3.00	17	15	14	17	15	13	16	14	13	11
4.00	18	17	15	18	16	15	17	16	15	13
5.00	19	18	16	18	17	16	17	16	16	14
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:2024-04-25

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:

**ISOCANDELA DIAGRAM**

Test:U:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	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: 2024-04-25

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:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

	2	4	6	8	10	lx
	0.1858	0.3716	0.5574	0.7432	0.929	fc
1	θ = 177.0DEG Φ out = 9.217 lm					
3.281						
3						
9.843						
5						
16.4						
7						
22.97						
9						
29.53						
m	4	2	0	2	4	
ft	13.1234	6.5617	0.0000	6.5617	13.1234	

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

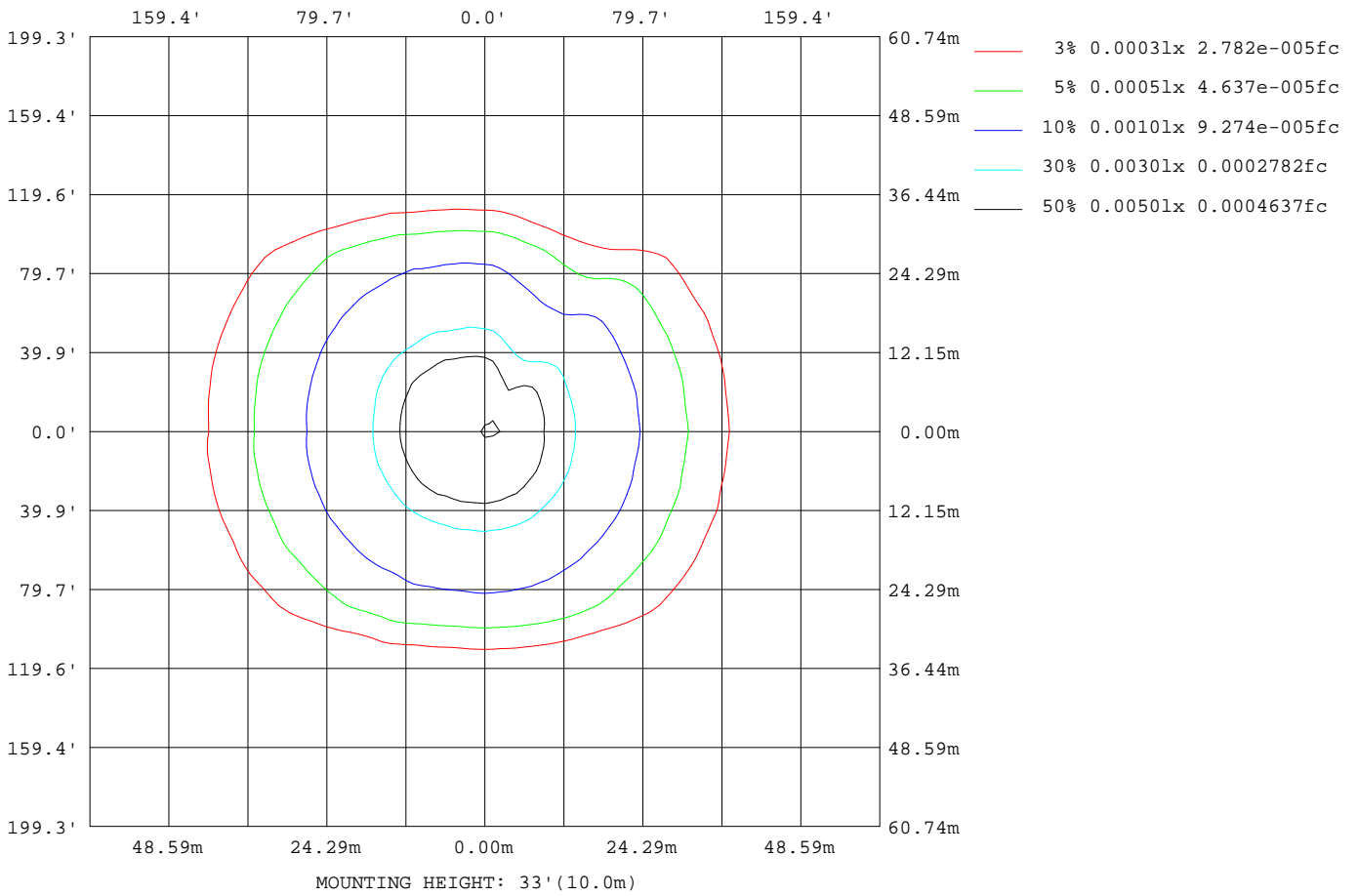
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:20DEG  
Operators:Y  
Test Date:2024-04-25

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:



**ISOLUX DIAGRAM**

Test:U:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	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:2024-04-25

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:11.98V I:0.1281A P:0.9225W PF:0.6012 Lamp Flux:235x1 lm		
NAME: 490923 ST14-12V-1W	TYPE:490923 ST14-12V-1W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

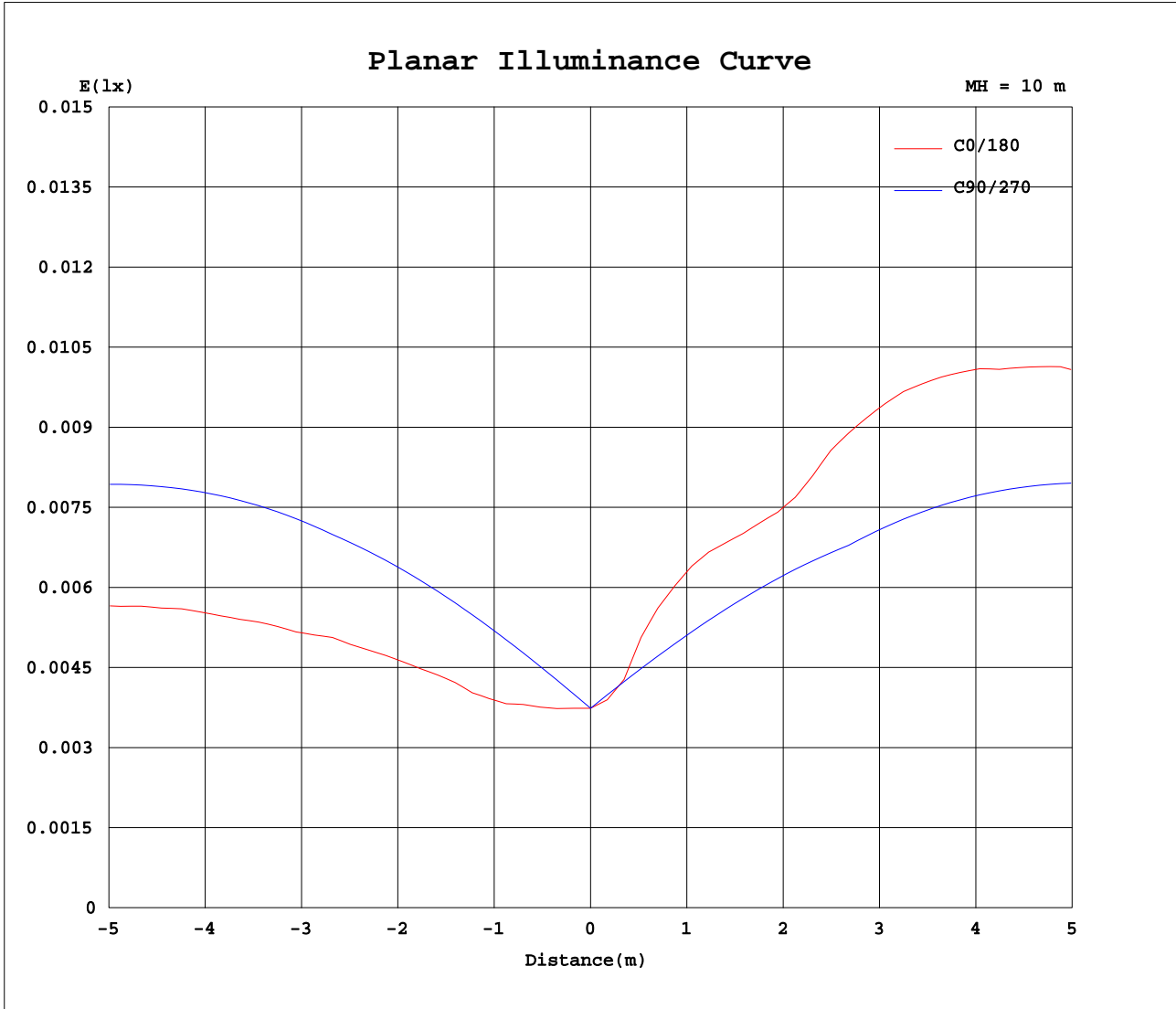
AvgL	cd/m2
L_0~180(65)av	24
L_0~180(75)av	41
L_0~180(85)av	115
L_90~270(65)av	24
L_90~270(75)av	40
L_90~270(85)av	0
L_45(65)av	25
L_45(75)av	41
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:20DEG  
Operators:Y  
Test Date:2024-04-25

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: 2024-04-25

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:







