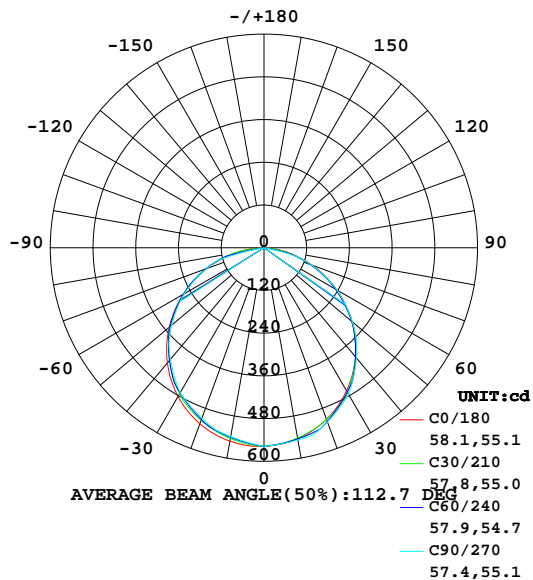


## LUMINAIRE PHOTOMETRIC TEST REPORT

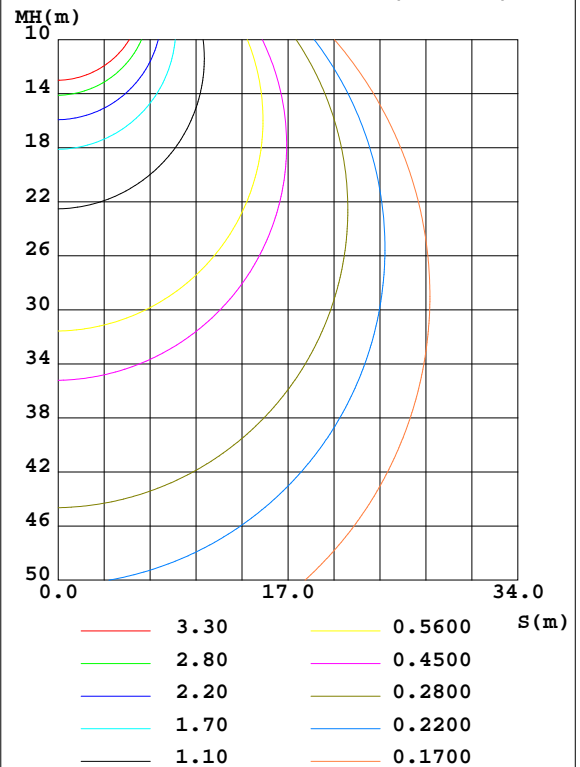
Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 34.27 lm/W			
MODEL	46.0737	I <sub>max</sub> (cd)	558.3	S/MH(C0/180)	1.28
NOMINAL POWER(W)	46.0719	LOR(%)	94.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1579.1	η UP,DN(C0-180)	0.0,46.6
NOMINAL FLUX(lm)	1680.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	94.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [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	553.8	552.0	553.2	554.6	557.3	551.1	548.3	548.6	0- 5	13.25	13.25	0.84,0.79
10	544.8	543.7	548.4	548.9	551.7	541.9	538.6	537.0	5- 10	39.19	52.44	3.32,3.12
15	531.2	533.1	543.5	541.0	541.4	530.4	529.0	523.1	10- 15	63.88	116.3	7.37,6.92
20	513.1	520.3	520.9	530.9	526.3	516.8	509.6	507.2	15- 20	86.53	202.9	12.8,12.1
25	490.6	494.9	498.4	507.6	506.6	495.1	490.3	483.7	20- 25	106.0	308.9	19.6,18.4
30	463.9	466.1	475.8	480.7	482.5	470.7	471.0	457.6	25- 30	122.2	431.1	27.3,25.7
35	433.4	436.2	439.9	452.4	454.3	445.0	439.9	430.3	30- 35	134.3	565.4	35.8,33.6
40	399.6	403.9	404.0	421.4	422.3	416.7	408.9	400.6	35- 40	141.6	707.0	44.8,42.1
45	362.3	362.1	368.1	380.9	386.6	380.0	377.9	362.7	40- 45	144.4	851.3	53.9,50.7
50	322.4	320.3	324.1	340.1	347.6	342.9	338.1	324.9	45- 50	142.4	993.8	62.9,59.1
55	279.9	278.5	280.1	299.1	305.9	305.5	298.3	286.9	50- 55	135.5	1129	71.5,67.2
60	235.7	231.3	236.1	251.8	261.9	261.6	258.6	243.1	55- 60	124.3	1254	79.4,74.6
65	190.2	185.3	188.8	205.3	216.2	218.4	214.6	200.3	60- 65	109.3	1363	86.3,81.1
70	144.6	139.4	141.5	158.6	169.6	174.6	170.7	157.2	65- 70	90.89	1454	92.1,86.5
75	99.49	93.41	94.29	111.5	123.4	129.9	126.7	113.6	70- 75	70.02	1524	96.5,90.7
80	57.17	43.90	0	57.47	78.75	73.84	0	61.69	75- 80	42.53	1566	99.2,93.2
85	19.16	0	0	0	35.74	0	0	0	80- 85	11.72	1578	99.9,93.9
90	0.7838	0	0	0	3.411	0	0	0	85- 90	1.127	1579	100,94
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		

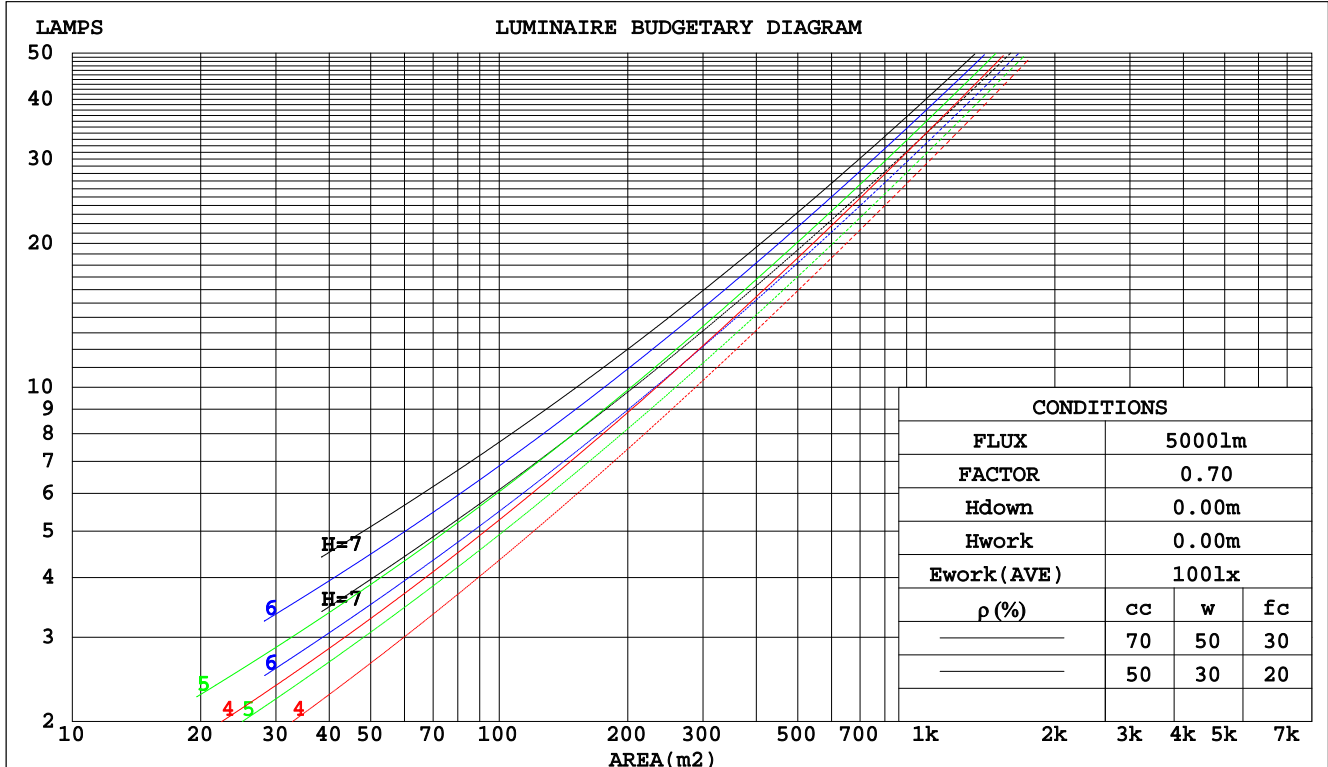
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding 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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	.00	.00	.00	.96	.96	.96	.94
1.0	.98	.94	.91	.96	.92	.89	.92	.89	.86	.88	.86	.84	.85	.83	.81	.79
2.0	.85	.79	.74	.84	.78	.73	.80	.75	.71	.77	.73	.69	.74	.71	.68	.66
3.0	.75	.67	.61	.73	.66	.61	.71	.65	.59	.68	.63	.58	.66	.61	.57	.55
4.0	.66	.58	.52	.65	.57	.51	.63	.56	.51	.60	.55	.50	.58	.53	.49	.47
5.0	.59	.51	.44	.58	.50	.44	.56	.49	.44	.54	.48	.43	.52	.47	.43	.41
6.0	.53	.45	.39	.52	.44	.39	.51	.43	.38	.49	.43	.38	.48	.42	.37	.36
7.0	.48	.40	.34	.47	.40	.34	.46	.39	.34	.45	.38	.34	.43	.38	.33	.31
8.0	.44	.36	.30	.43	.36	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.28
9.0	.40	.33	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25
10.0	.37	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.24	.34	.28	.24	.23



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding 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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.282	.161	.051	.276	.157	.050	.263	.151	.048	.252	.145	.047	.241	.140	.045	
2.0	.270	.148	.045	.264	.146	.045	.253	.141	.044	.243	.137	.043	.234	.132	.042	
3.0	.252	.134	.040	.247	.132	.040	.237	.128	.039	.228	.125	.038	.220	.122	.038	
4.0	.233	.121	.036	.228	.120	.035	.220	.117	.035	.212	.114	.034	.204	.111	.034	
5.0	.216	.110	.032	.212	.109	.032	.204	.106	.031	.197	.104	.031	.190	.102	.031	
6.0	.200	.100	.029	.197	.099	.029	.190	.097	.028	.184	.095	.028	.178	.093	.028	
7.0	.187	.092	.026	.183	.091	.026	.177	.090	.026	.172	.088	.026	.166	.086	.025	
8.0	.174	.085	.024	.171	.084	.024	.166	.083	.024	.161	.082	.024	.156	.080	.023	
9.0	.163	.079	.022	.161	.078	.022	.156	.077	.022	.151	.076	.022	.147	.075	.022	
10.0	.154	.074	.020	.151	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.020	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.179	.179	.179	.153	.153	.153	.104	.104	.104	.060	.060	.060	.019	.019	.019	
1.0	.169	.147	.127	.144	.126	.109	.099	.087	.076	.057	.050	.044	.018	.016	.014	
2.0	.161	.124	.093	.138	.107	.080	.095	.074	.056	.055	.043	.033	.018	.014	.011	
3.0	.154	.107	.070	.132	.093	.061	.091	.064	.043	.052	.038	.025	.017	.012	.008	
4.0	.147	.095	.055	.126	.082	.048	.087	.057	.034	.050	.033	.020	.016	.011	.007	
5.0	.140	.085	.044	.120	.074	.039	.083	.051	.027	.048	.030	.016	.015	.010	.005	
6.0	.134	.077	.037	.115	.067	.032	.079	.047	.023	.046	.028	.013	.015	.009	.004	
7.0	.127	.071	.031	.109	.061	.027	.076	.043	.019	.044	.025	.011	.014	.008	.004	
8.0	.121	.065	.027	.104	.057	.024	.072	.040	.017	.042	.023	.010	.014	.008	.003	
9.0	.115	.061	.024	.099	.053	.021	.069	.037	.015	.040	.022	.009	.013	.007	.003	
10.0	.110	.057	.021	.095	.049	.018	.066	.035	.013	.038	.020	.008	.012	.007	.003	

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm										
NAME: CL-24-48x24-SP					TYPE:Cloud Frame			WEIGHT:		
SPEC.:FLS-1W4-6000K					DIM.: 48*24			SERIAL No.:01		
MFR.: EVERFINE					SUR.:			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	10.9	12.4	11.2	12.6	12.8	10.9	12.4	11.1	12.6	12.8
3H	12.4	13.8	12.7	14.0	14.3	12.3	13.7	12.6	13.9	14.2
4H	13.0	14.3	13.3	14.5	14.8	12.8	14.1	13.1	14.4	14.6
6H	13.3	14.6	13.7	14.9	15.1	12.8	14.1	13.2	14.4	14.6
8H	13.4	14.7	13.8	14.9	15.2	12.8	14.0	13.1	14.3	14.6
12H	13.5	14.6	13.8	14.9	15.2	12.7	13.9	13.1	14.2	14.5
4H 2H	11.5	12.8	11.8	13.1	13.3	11.4	12.8	11.8	13.0	13.3
3H	13.1	14.3	13.5	14.6	14.9	13.0	14.2	13.4	14.5	14.8
4H	13.8	14.9	14.2	15.2	15.5	13.7	14.7	14.0	15.0	15.4
6H	14.3	15.2	14.7	15.6	16.0	13.7	14.7	14.1	15.0	15.4
8H	14.4	15.3	14.9	15.7	16.1	13.7	14.6	14.1	14.9	15.3
12H	14.5	15.3	14.9	15.7	16.1	13.6	14.4	14.1	14.8	15.2
8H 4H	14.0	14.9	14.4	15.3	15.7	13.9	14.7	14.3	15.1	15.5
6H	14.6	15.4	15.1	15.8	16.2	14.0	14.7	14.4	15.1	15.5
8H	14.8	15.5	15.3	15.9	16.3	14.0	14.6	14.4	15.0	15.5
12H	14.9	15.5	15.4	15.9	16.4	13.9	14.5	14.4	14.9	15.4
12H 4H	14.0	14.8	14.4	15.2	15.6	13.9	14.7	14.3	15.1	15.5
6H	14.6	15.3	15.1	15.7	16.1	14.0	14.6	14.5	15.1	15.5
8H	14.8	15.4	15.3	15.8	16.3	14.0	14.5	14.4	15.0	15.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 1680 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.8)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	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) x RCR = 5									
k = 0.60	54	43	37	53	43	37	52	43	36	30
0.80	64	53	46	63	52	46	61	52	45	39
1.00	72	61	54	70	61	54	68	62	54	47
1.25	78	68	62	77	68	61	74	66	61	54
1.50	83	74	67	81	73	67	79	71	66	59
2.00	90	82	76	88	80	75	85	78	73	66
2.50	93	86	80	91	85	80	88	82	78	70
3.00	96	90	85	94	89	84	91	86	82	74
4.00	100	95	91	98	93	89	94	90	87	79
5.00	102	98	94	100	96	93	96	93	90	82
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding Angle:

Conical surface Flux(90deg):

851.34 lm

%lum = 53.9%

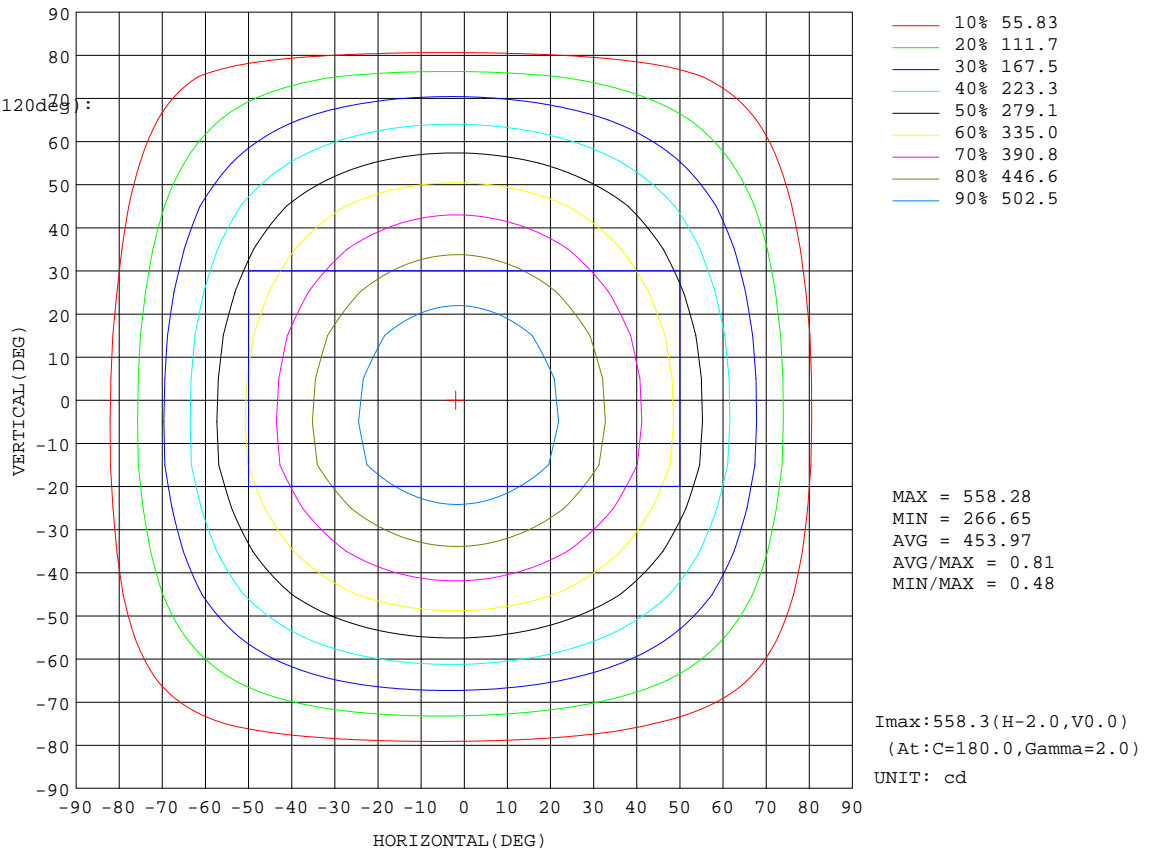
%lamp = 50.7%

Conical surface Flux(120deg):

1253.6 lm

%lum = 79.4%

%lamp = 74.6%

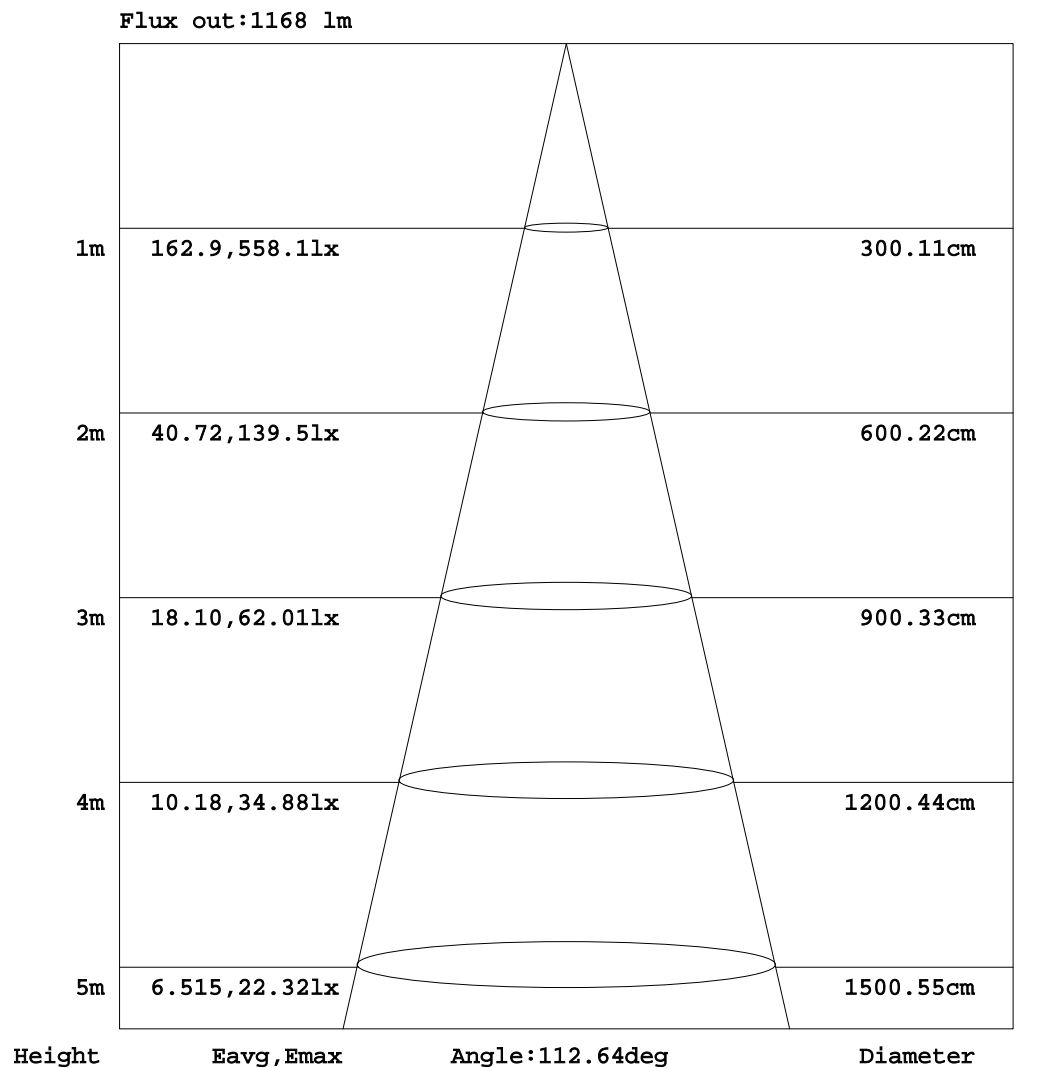


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

### AAI Figure

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding Angle:



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

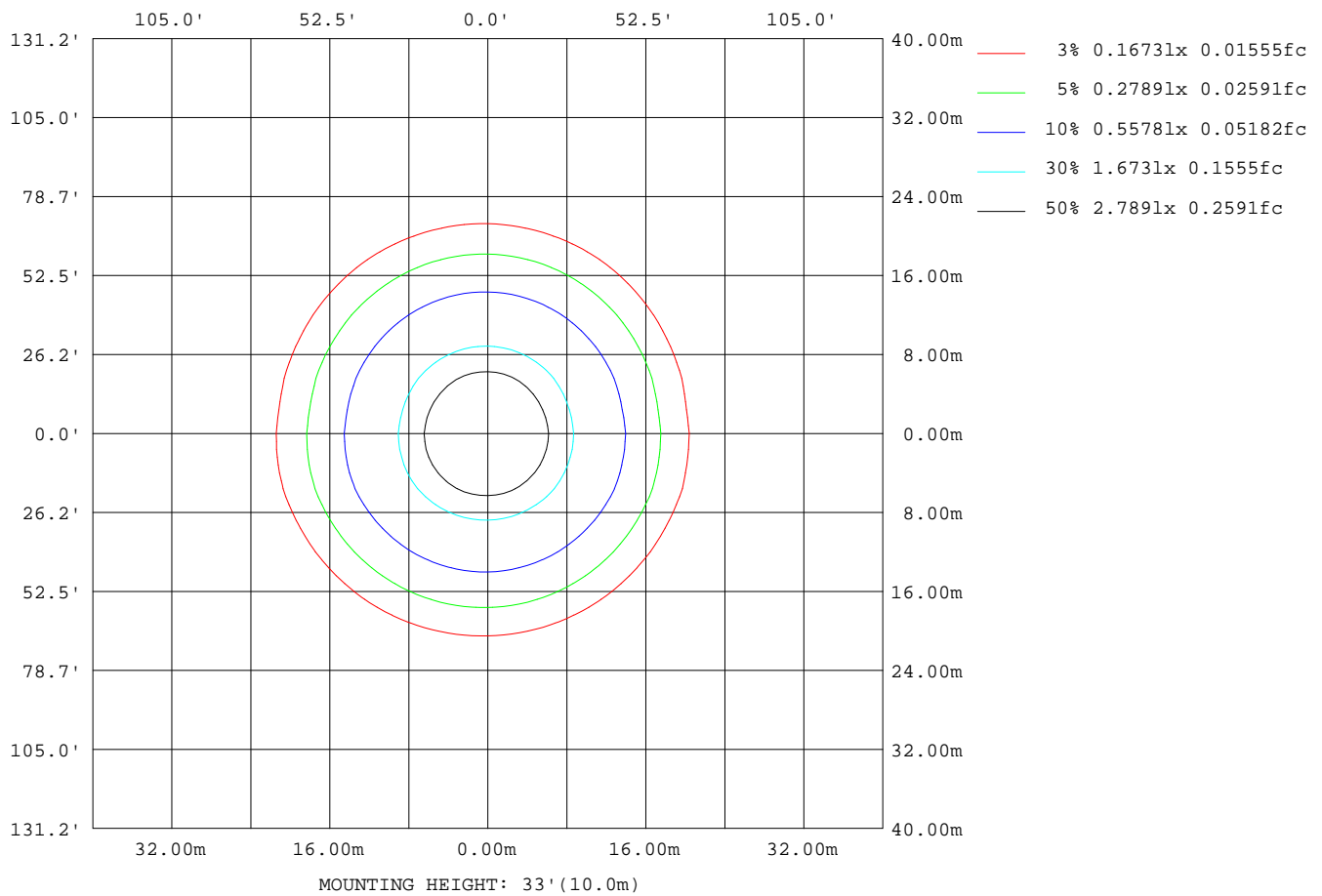
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:



ISOLUX DIAGRAM

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:24.09V I:1.913A P:46.07W PF:1.000 Lamp Flux:1680.27x1 lm		
NAME: CL-24-48x24-SP	TYPE:Cloud Frame	WEIGHT:
SPEC.:FLS-1W4-6000K	DIM.: 48*24	SERIAL No.:01
MFR.: EVERFINE	SUR.:	Shielding Angle:

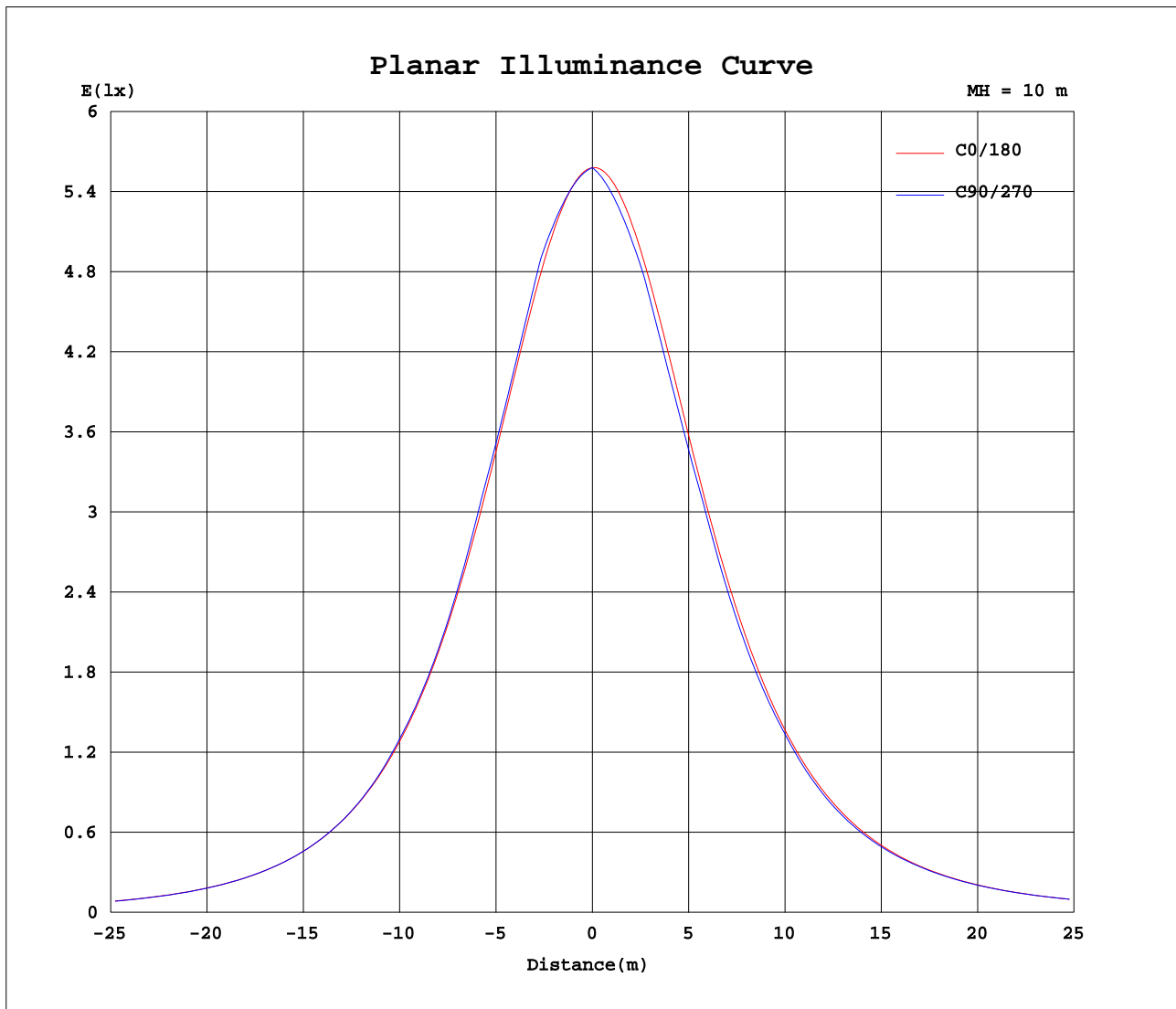
AvgL	cd/m2
L_0~180(65)av	576
L_0~180(75)av	516
L_0~180(85)av	377
L_90~270(65)av	572
L_90~270(75)av	511
L_90~270(85)av	0
L_45(65)av	573
L_45(75)av	519
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:29 October 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity:65.0%  
Test Distance:5.640m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 29 October 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.293  
Humidity: 65.0%  
Test Distance: 5.640m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.293
Humidity:65.0%
Test Distance:5.640m [K=1.0000]
Remarks:

```

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.293
Humidity:65.0%
Test Distance:5.640m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.293
Humidity:65.0%
Test Distance:5.640m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.293
Humidity:65.0%
Test Distance:5.640m [K=1.0000]
Remarks:

```