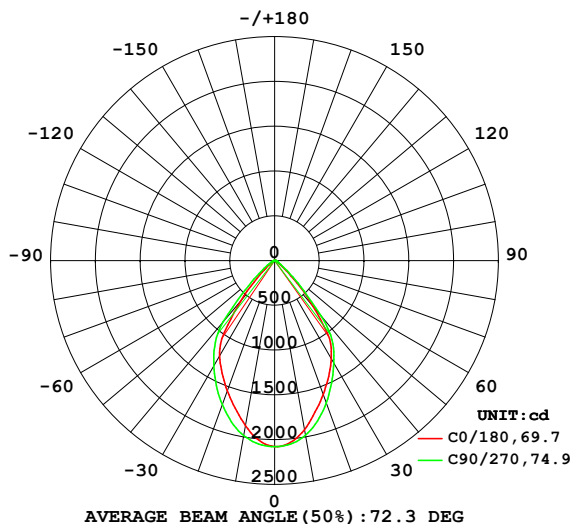


# LUMINAIRE PHOTOMETRIC TEST REPORT

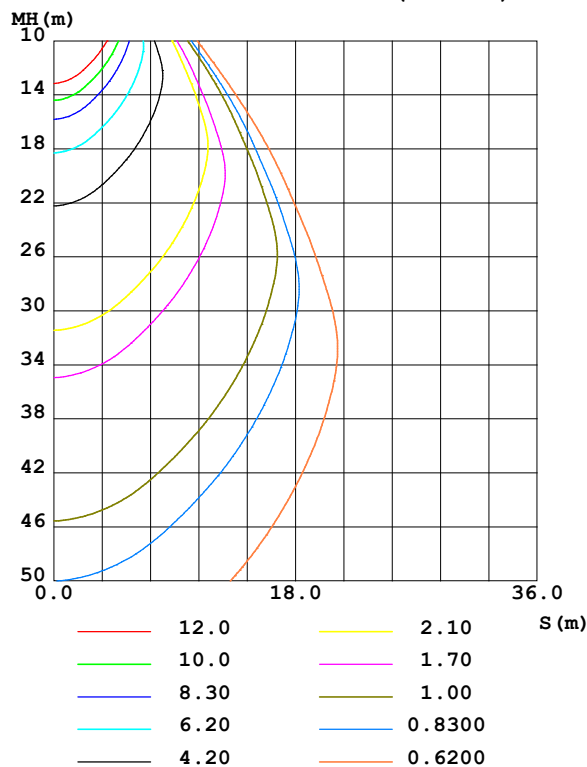
Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 116.98 lm/W			
MODEL	LED541 B34V2	I <sub>max</sub> (cd)	2078	S/MH(C0/180)	0.93
NOMINAL POWER(W)	23	LOR(%)	100.0	S/MH(C90/270)	1.00
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	2497.7	η UP,DN(C0-180)	0.0,50.6
NOMINAL FLUX(lm)	2497.72	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down (%)	100.0	CIBSE SHR MAX	1.10

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [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
10	1872	1952	1986	1932	1921	1972	1981	1912	0- 10	191.7	191.7	7.67,7.67
20	1547	1627	1712	1571	1590	1663	1692	1546	10- 20	501.8	693.4	27.8,27.8
30	1230	1204	1359	1235	1266	1221	1324	1194	20- 30	659.9	1353	54.2,54.2
40	585.5	688.2	895.0	982.6	668.2	698.5	812.1	897.1	30- 40	646.7	2000	80.1,80.1
50	117.7	141.2	229.3	326.9	145.1	149.5	208.0	266.1	40- 50	346.2	2346	93.9,93.9
60	32.04	34.86	65.46	104.7	38.45	37.08	60.14	95.14	50- 60	95.75	2442	97.8,97.8
70	11.45	18.66	27.35	30.97	13.61	20.48	26.28	23.15	60- 70	35.84	2478	99.2,99.2
80	4.615	8.570	13.56	8.103	5.793	9.842	13.35	6.891	70- 80	14.44	2492	99.8,99.8
90	0.8125	2.796	2.678	1.969	1.142	2.719	0.2046	0.8569	80- 90	5.560	2498	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		

Conical surface Flux(90deg): 2223.4 lm

%lum = 89.0%

%lamp = 89.0%

Conical surface Flux(130deg): 2463.9 lm

%lum = 98.6%

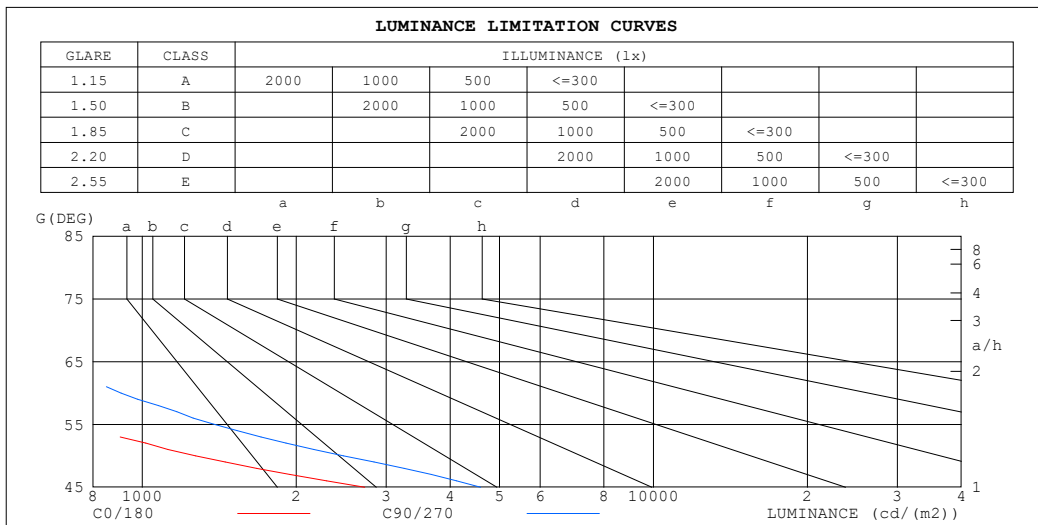
%lamp = 98.6%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:DAMIN  
 Test Date:2023-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
 Humidity:65.0%  
 Test Distance:9.640m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	186	640
80	185	542
75	206	534
70	232	555
65	300	679
60	445	909
55	710	1387
50	1271	2477
45	2724	4588

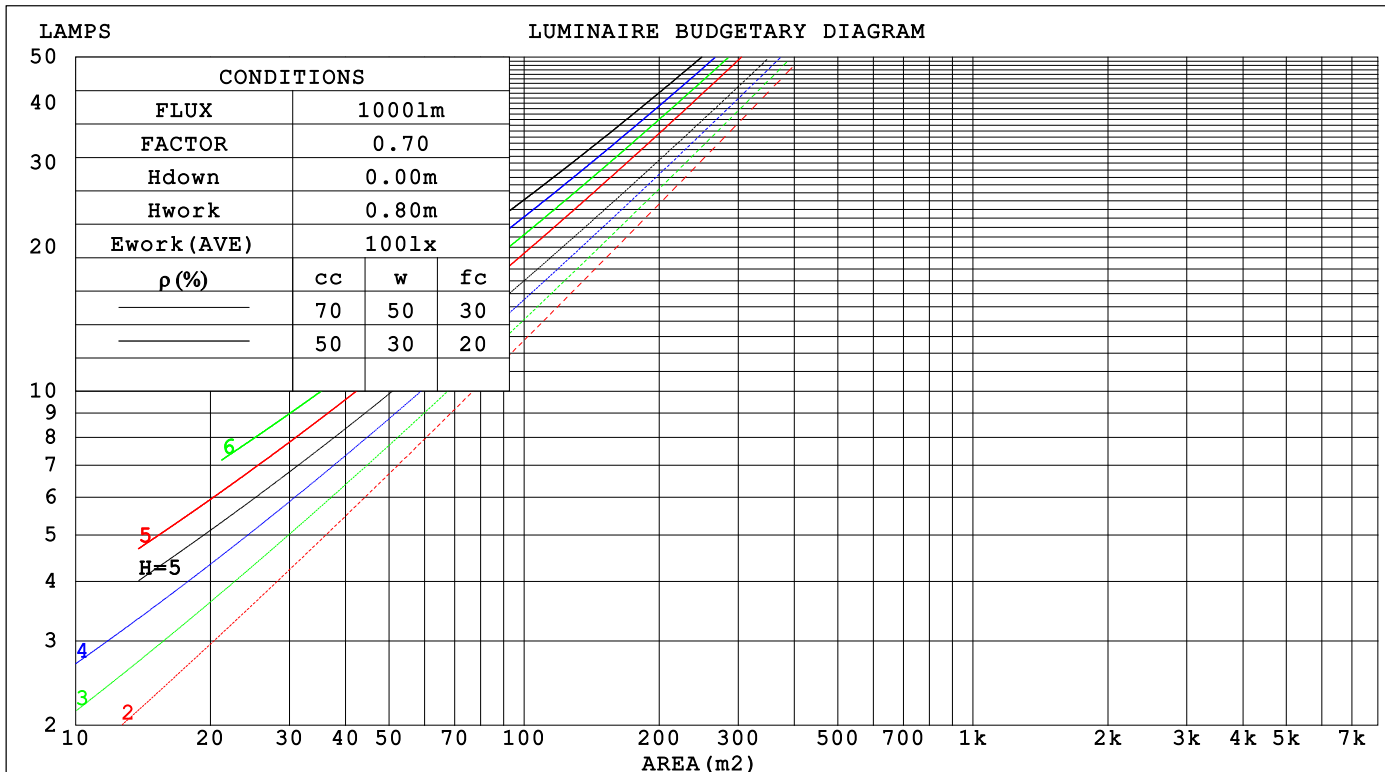
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 2023-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 9.640m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)			TYPE: 23W			WEIGHT:		
SPEC.: 4000K			DIM.:			SERIAL No.:		
MFR.: EVERFINE			SUR.: 1.2*0.12			Shielding Angle:		

pcc	80%			70%			50%			30%			10%			0
p <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>fc</sub>	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	1.09	1.07	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.98	.96	.96	.95	.94	.92
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.90	.87	.85	.83
3.0	.92	.87	.82	.91	.86	.81	.88	.84	.80	.86	.82	.79	.83	.80	.78	.76
4.0	.85	.79	.74	.84	.78	.73	.82	.77	.73	.80	.75	.72	.78	.74	.71	.69
5.0	.79	.72	.67	.78	.71	.67	.76	.70	.66	.74	.69	.65	.72	.68	.65	.63
6.0	.73	.66	.61	.72	.65	.61	.70	.65	.60	.69	.64	.60	.67	.63	.60	.58
7.0	.68	.61	.56	.67	.60	.56	.65	.60	.55	.64	.59	.55	.63	.58	.55	.53
8.0	.63	.56	.52	.62	.56	.51	.61	.55	.51	.60	.55	.51	.59	.54	.51	.49
9.0	.59	.52	.48	.58	.52	.48	.57	.51	.47	.56	.51	.47	.55	.51	.47	.46
10.0	.55	.49	.44	.55	.48	.44	.54	.48	.44	.53	.48	.44	.52	.47	.44	.42



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)			TYPE: 23W			WEIGHT:		
SPEC.: 4000K			DIM.:			SERIAL No.:		
MFR.: EVERFINE			SUR.: 1.2*0.12			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	.203	.115	.037	.196	.112	.035	.183	.105	.034	.171	.099	.032	.161	.093	.030		
2.0	.196	.107	.033	.190	.105	.032	.179	.100	.031	.169	.095	.030	.160	.090	.029		
3.0	.187	.100	.030	.182	.098	.029	.173	.094	.028	.164	.090	.028	.156	.086	.027		
4.0	.178	.093	.027	.174	.091	.027	.166	.088	.026	.158	.085	.026	.151	.082	.025		
5.0	.169	.086	.025	.166	.085	.025	.159	.083	.024	.152	.080	.024	.146	.078	.023		
6.0	.161	.081	.023	.158	.080	.023	.152	.078	.023	.146	.076	.022	.140	.074	.022		
7.0	.154	.076	.022	.151	.075	.021	.145	.073	.021	.140	.072	.021	.135	.070	.021		
8.0	.146	.072	.020	.144	.071	.020	.139	.069	.020	.134	.068	.020	.129	.066	.019		
9.0	.140	.068	.019	.137	.067	.019	.133	.066	.019	.128	.064	.018	.124	.063	.018		
10.0	.133	.064	.018	.131	.063	.018	.127	.062	.018	.123	.061	.017	.120	.060	.017		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016		
2.0	.159	.132	.110	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013		
3.0	.149	.114	.086	.127	.098	.075	.087	.068	.052	.050	.040	.031	.016	.013	.010		
4.0	.139	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008		
5.0	.131	.088	.056	.113	.076	.049	.078	.053	.035	.045	.031	.020	.015	.010	.007		
6.0	.125	.079	.047	.107	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006		
7.0	.118	.072	.039	.102	.062	.034	.070	.044	.024	.041	.026	.014	.013	.008	.005		
8.0	.113	.066	.034	.097	.057	.029	.067	.040	.021	.039	.024	.012	.013	.008	.004		
9.0	.108	.061	.029	.093	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004		
10.0	.103	.057	.026	.089	.049	.022	.062	.035	.016	.036	.020	.010	.012	.007	.003		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm										
NAME: LED541 B34V2 (23W 4000K)					TYPE: 23W			WEIGHT:		
SPEC.: 4000K					DIM.:			SERIAL No.:		
MFR.: EVERFINE					SUR.: 1.2*0.12			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	12.3	13.4	12.6	13.6	13.8	13.9	15.0	14.1	15.2	15.3
3H	12.2	13.2	12.5	13.4	13.6	13.8	14.8	14.1	15.0	15.2
4H	12.1	13.1	12.4	13.3	13.5	13.8	14.7	14.1	15.0	15.2
6H	12.0	12.9	12.3	13.2	13.4	13.7	14.6	14.1	14.9	15.1
8H	12.0	12.9	12.3	13.1	13.4	13.7	14.6	14.1	14.9	15.1
12H	12.0	12.8	12.3	13.1	13.3	13.7	14.5	14.1	14.8	15.1
4H 2H	12.1	13.1	12.4	13.3	13.5	13.6	14.6	13.9	14.8	15.1
3H	12.0	12.8	12.3	13.1	13.4	13.6	14.4	13.9	14.7	15.0
4H	12.0	12.7	12.3	13.0	13.3	13.6	14.3	13.9	14.6	14.9
6H	11.9	12.5	12.3	12.9	13.2	13.6	14.3	14.0	14.6	14.9
8H	11.9	12.5	12.3	12.8	13.2	13.6	14.2	14.0	14.6	14.9
12H	11.8	12.4	12.2	12.7	13.1	13.6	14.2	14.0	14.6	14.9
8H 4H	11.9	12.5	12.3	12.8	13.2	13.5	14.1	13.9	14.4	14.8
6H	11.8	12.3	12.2	12.7	13.1	13.5	14.0	13.9	14.4	14.8
8H	11.8	12.2	12.2	12.6	13.1	13.6	14.0	14.0	14.4	14.9
12H	11.8	12.1	12.2	12.6	13.1	13.6	14.0	14.1	14.4	14.9
12H 4H	11.8	12.4	12.2	12.7	13.1	13.4	14.0	13.8	14.4	14.7
6H	11.8	12.2	12.2	12.6	13.1	13.5	13.9	13.9	14.3	14.8
8H	11.8	12.1	12.2	12.6	13.1	13.5	13.9	14.0	14.3	14.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.6 / - 6.9					+ 2.5 / - 5.3				
1.5H	+ 4.3 / - 6.5					+ 4.0 / - 5.7				
2.0H	+ 5.1 / - 4.0					+ 5.5 / - 4.3				

CIE Pub.117, 2498 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 3.2)  
Area: 0.144 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:

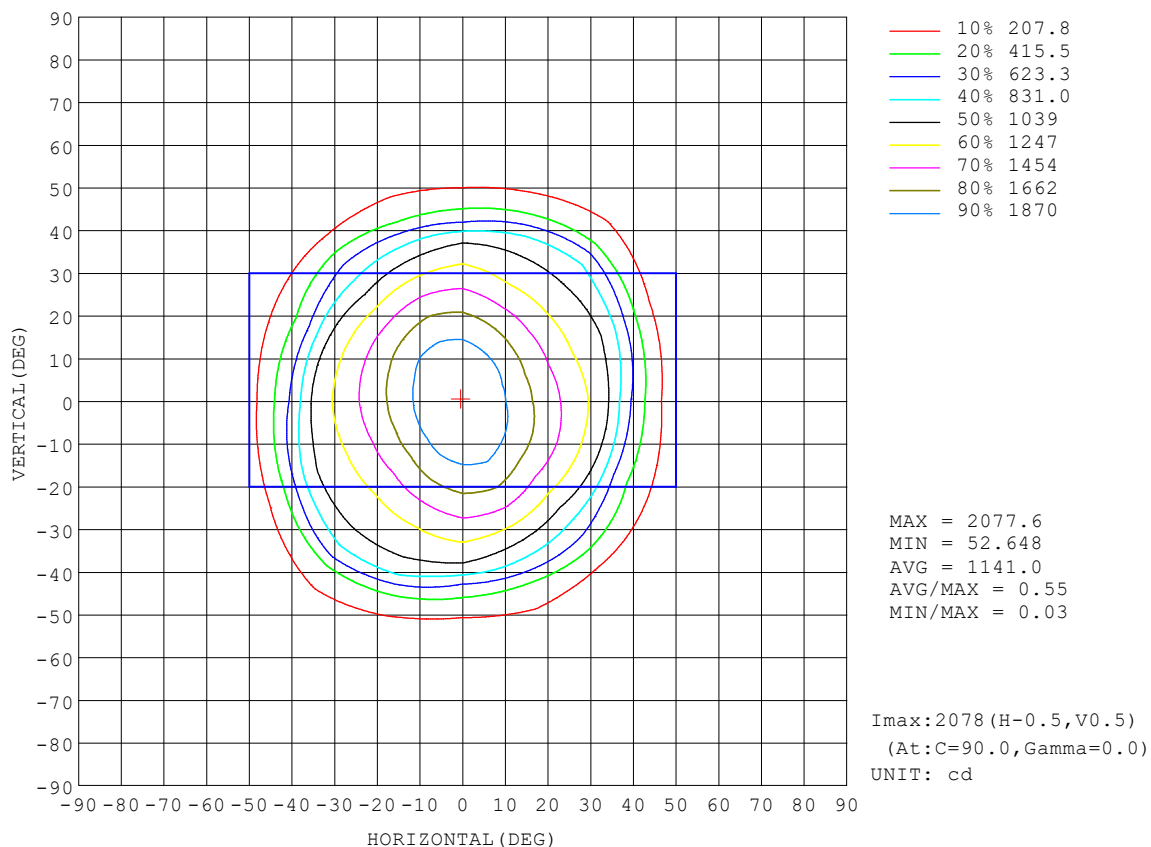
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	79	71	66	78	71	66	77	70	66	62
0.80	88	80	76	87	80	75	86	79	75	71
1.00	94	87	82	93	86	82	91	87	82	77
1.25	99	92	88	98	92	88	96	91	87	82
1.50	102	96	92	101	96	92	98	94	91	86
2.00	106	101	97	104	100	96	102	98	95	89
2.50	108	103	100	106	102	99	103	100	97	91
3.00	110	106	103	108	104	101	105	102	99	93
4.00	112	109	106	110	107	105	106	104	102	95
5.00	114	111	108	111	109	107	107	105	104	96
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: 25.3 °C  
Operators: DAMIN  
Test Date: 2023-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 9.640m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:

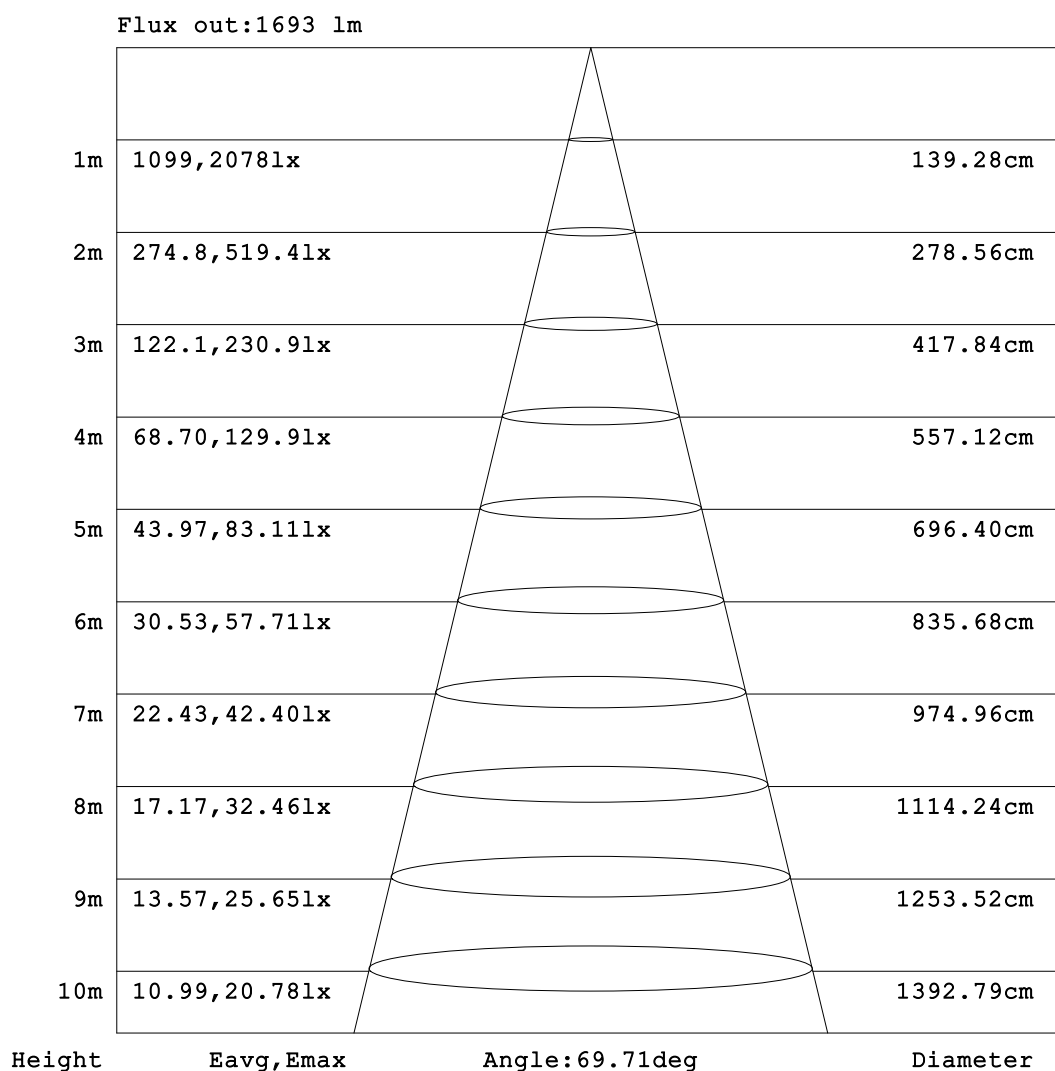


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### AAI Figure

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:



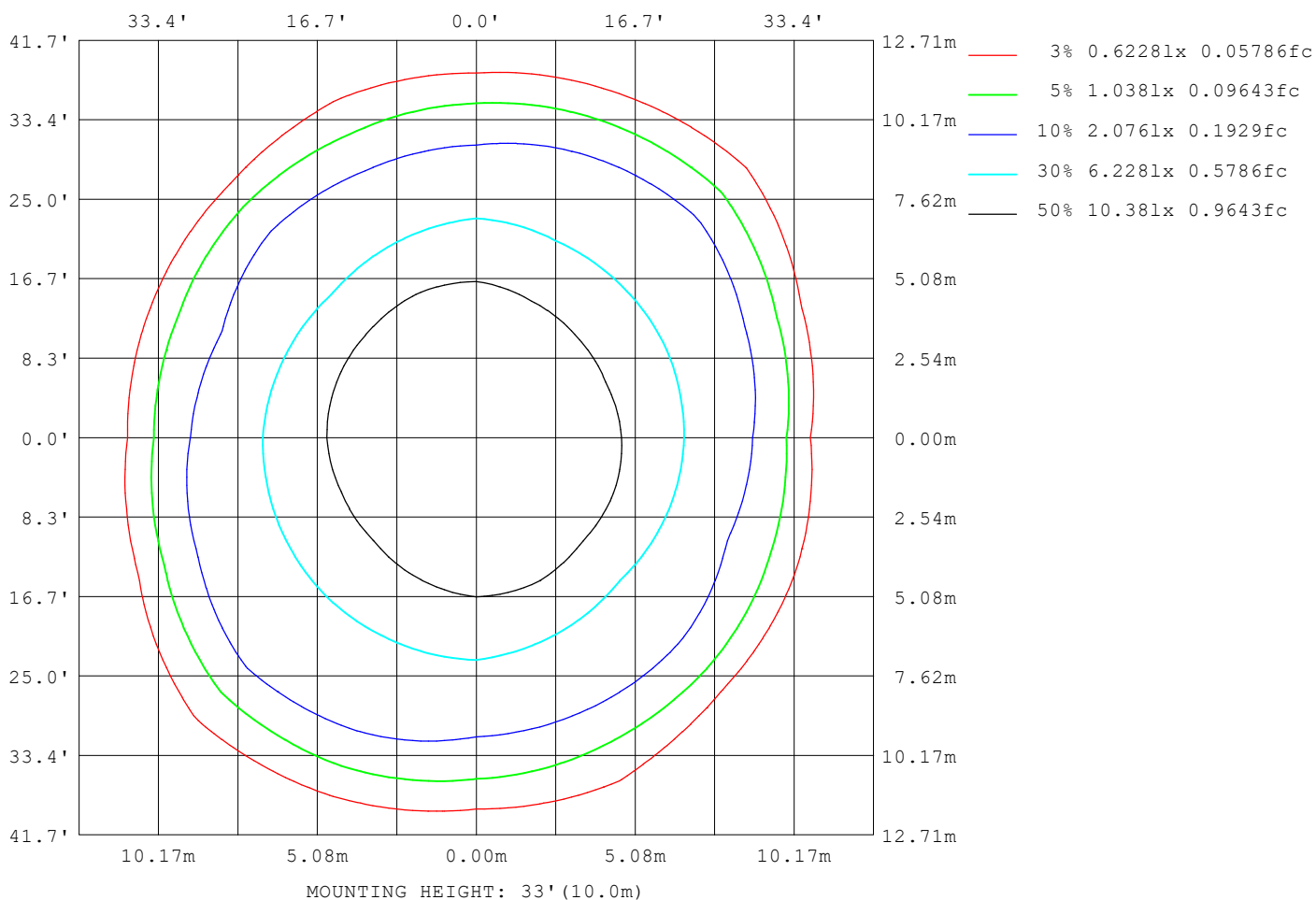
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm		
NAME: LED541 B34V2 (23W 4000K)	TYPE: 23W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.: 1.2*0.12	Shielding Angle:

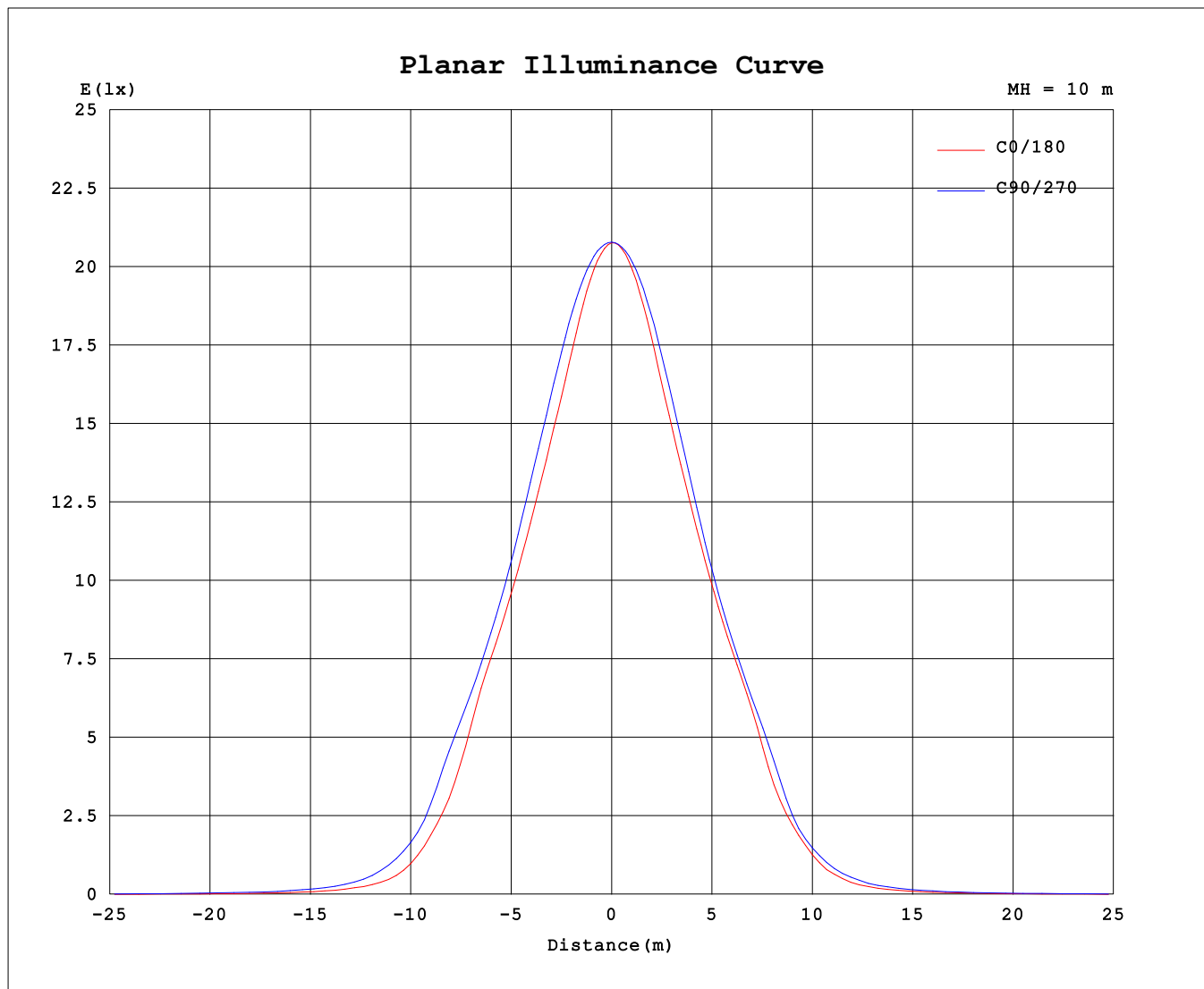
AvgL	cd/m2
L_0~180 (65) av	334
L_0~180 (75) av	225
L_0~180 (85) av	217
L_90~270 (65) av	650
L_90~270 (75) av	532
L_90~270 (85) av	619
L_45 (65) av	707
L_45 (75) av	345
L_45 (85) av	385

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3℃  
Operators:DAMIN  
Test Date:2023-04-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:9.640m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3 °C  
Operators: DAMIN  
Test Date: 2023-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 9.640m [K=1.0000]  
Remarks:

<b>Test:U:230.69V I:0.1027A P:21.351W PF:0.9014 Freq:49.99Hz</b> <b>UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:2497.72x1 lm</b>		
<b>NAME: LED541 B34V2 (23W 4000K)</b>	<b>TYPE: 23W</b>	<b>WEIGHT:</b>
<b>SPEC.: 4000K</b>	<b>DIM.:</b>	<b>SERIAL No.:</b>
<b>MFR.: EVERFINE</b>	<b>SUR.: 1.2*0.12</b>	<b>Shielding Angle:</b>

UNIT: cd

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators: DAMIN  
Test Date: 2023-04-11

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

```