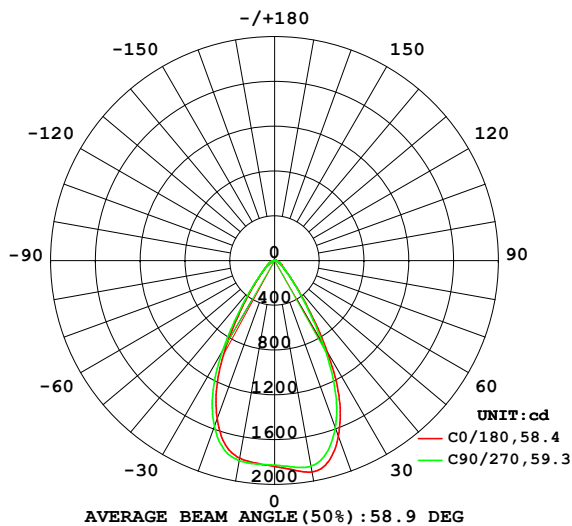


LUMINAIRE PHOTOMETRIC TEST REPORT

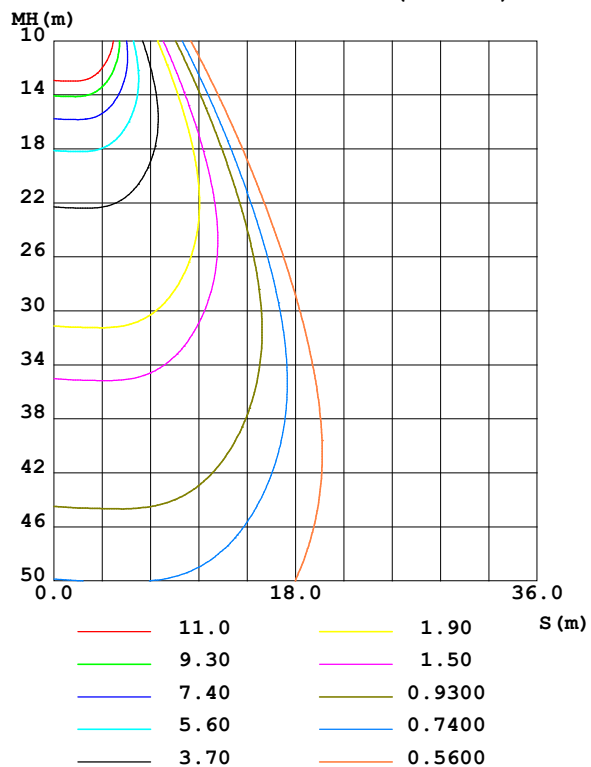
NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 96.33 lm/W
MODEL	4000K CRI90	I <sub>max</sub> (cd)	1919	S/MH(C0/180)	0.86	
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.89	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1868.9	η UP,DN(C0-180)	0.0,49.5	
NOMINAL FLUX(lm)	1868.88	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.5	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	225	η down (%)	100.0	CIBSE SHR MAX	0.90	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2021-03-16

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
 Humidity: 65.0%  
 Test Distance: 8.402m [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
10	1917	1912	1865	1801	1792	1783	1815	1866	0- 10	175.7	175.7	9.4,9.4
20	1669	1666	1587	1505	1502	1525	1575	1637	10- 20	491.9	667.6	35.7,35.7
30	941.9	933.7	874.3	828.1	845.1	886.0	936.5	963.0	20- 30	580.9	1249	66.8,66.8
40	292.8	290.1	280.6	267.3	283.9	297.9	309.8	316.5	30- 40	336.6	1585	84.8,84.8
50	111.4	110.0	107.3	103.8	116.2	118.7	122.7	126.5	40- 50	140.2	1725	92.3,92.3
60	57.06	55.94	54.78	53.83	63.65	64.70	66.21	67.87	50- 60	74.39	1800	96.3,96.3
70	29.56	28.49	27.94	27.66	35.45	36.24	36.92	37.37	60- 70	45.25	1845	98.7,98.7
80	5.648	5.209	4.881	4.876	9.824	10.39	10.77	10.90	70- 80	18.39	1863	99.7,99.7
90	3.289	3.362	3.368	3.431	5.655	5.660	5.729	5.755	80- 90	5.539	1869	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): 1668.5 lm

%lum = 89.3%

%lamp = 89.3%

Conical surface Flux(120deg): 1799.7 lm

%lum = 96.3%

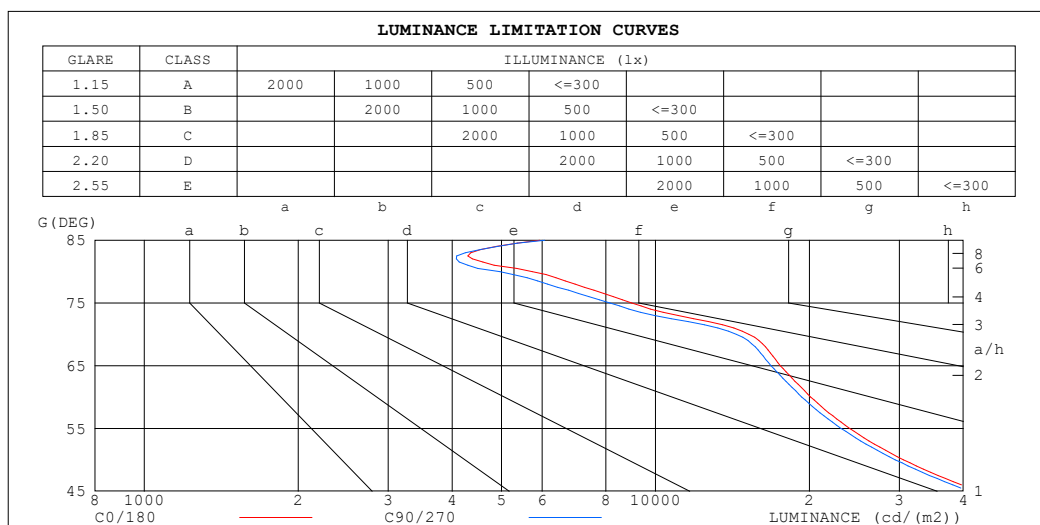
%lamp = 96.3%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2021-03-16

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

# LUMINANCE LIMITATION CURVES

NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	5939	6075
80	5736	4958
75	8984	8142
70	15242	14408
65	17556	16819
60	20128	19324
55	23991	23075
50	30560	29449
45	43026	41303

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

### WEC AND CCEC

NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	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	.197	.112	.035	.190	.108	.034	.177	.102	.032	.166	.096	.031	.155	.090	.029		
2.0	.188	.103	.032	.182	.100	.031	.171	.095	.030	.162	.091	.028	.152	.086	.027		
3.0	.178	.095	.028	.173	.093	.028	.164	.089	.027	.155	.085	.026	.147	.082	.025		
4.0	.169	.088	.026	.164	.086	.025	.156	.083	.025	.149	.080	.024	.142	.077	.023		
5.0	.160	.081	.024	.156	.080	.023	.149	.078	.023	.142	.075	.022	.136	.073	.022		
6.0	.152	.076	.022	.148	.075	.022	.142	.073	.021	.136	.071	.021	.131	.069	.020		
7.0	.144	.071	.020	.141	.070	.020	.136	.069	.020	.131	.067	.019	.126	.065	.019		
8.0	.137	.067	.019	.135	.066	.019	.130	.065	.019	.125	.063	.018	.121	.062	.018		
9.0	.131	.063	.018	.129	.063	.018	.124	.061	.017	.120	.060	.017	.116	.059	.017		
10.0	.125	.060	.017	.123	.059	.017	.119	.058	.016	.115	.057	.016	.112	.056	.016		

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	.172	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.136	.114	.096	.093	.079	.067	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.058	.110	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.115	.071	.041	.099	.062	.035	.068	.043	.025	.040	.025	.015	.013	.008	.005	
8.0	.109	.065	.035	.094	.056	.030	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.104	.060	.030	.089	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004	
10.0	.099	.056	.027	.085	.048	.023	.059	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

NAME: TL45-20G40-60-M					TYPE:		WEIGHT:				
SPEC.: 36V&500mA					DIM.: D90*H40		SERIAL No.:				
MFR.: EVERFINE					SUR.: D85		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	2H	19.5	20.5	19.7	20.7	20.9	19.3	20.3	19.5	20.5	20.7
	3H	19.8	20.8	20.1	21.0	21.2	19.6	20.6	19.9	20.8	21.0
	4H	19.9	20.8	20.1	21.0	21.2	19.6	20.5	19.9	20.8	21.0
	6H	19.8	20.7	20.1	20.9	21.2	19.6	20.4	19.9	20.7	20.9
	8H	19.8	20.6	20.1	20.9	21.1	19.6	20.4	19.9	20.6	20.9
	12H	19.8	20.5	20.1	20.8	21.1	19.5	20.3	19.9	20.6	20.9
4H	2H	19.5	20.4	19.8	20.7	20.9	19.4	20.3	19.6	20.5	20.7
	3H	20.0	20.8	20.3	21.0	21.3	19.8	20.6	20.1	20.9	21.1
	4H	20.1	20.8	20.4	21.1	21.4	19.9	20.6	20.2	20.9	21.2
	6H	20.1	20.7	20.4	21.0	21.4	19.8	20.5	20.2	20.8	21.1
	8H	20.0	20.6	20.4	21.0	21.3	19.8	20.4	20.2	20.7	21.1
	12H	20.0	20.5	20.4	20.9	21.3	19.8	20.3	20.2	20.7	21.1
8H	4H	20.0	20.6	20.4	20.9	21.3	19.8	20.4	20.2	20.7	21.1
	6H	20.0	20.5	20.4	20.9	21.3	19.8	20.3	20.2	20.7	21.1
	8H	20.0	20.4	20.4	20.8	21.3	19.8	20.2	20.2	20.6	21.1
	12H	20.0	20.3	20.4	20.8	21.2	19.8	20.1	20.2	20.6	21.0
12H	4H	20.0	20.5	20.4	20.9	21.3	19.8	20.3	20.2	20.7	21.1
	6H	20.0	20.4	20.4	20.8	21.3	19.8	20.2	20.2	20.6	21.0
	8H	20.0	20.3	20.4	20.8	21.2	19.7	20.1	20.2	20.5	21.0
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 1.5 / - 2.0					+ 1.4 / - 2.0				
1.5H		+ 2.6 / - 1.5					+ 2.5 / - 1.5				
2.0H		+ 2.1 / - 1.2					+ 2.1 / - 1.2				

CIE Pub.117, 1869 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.2)  
Area: 0.00567 m2

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

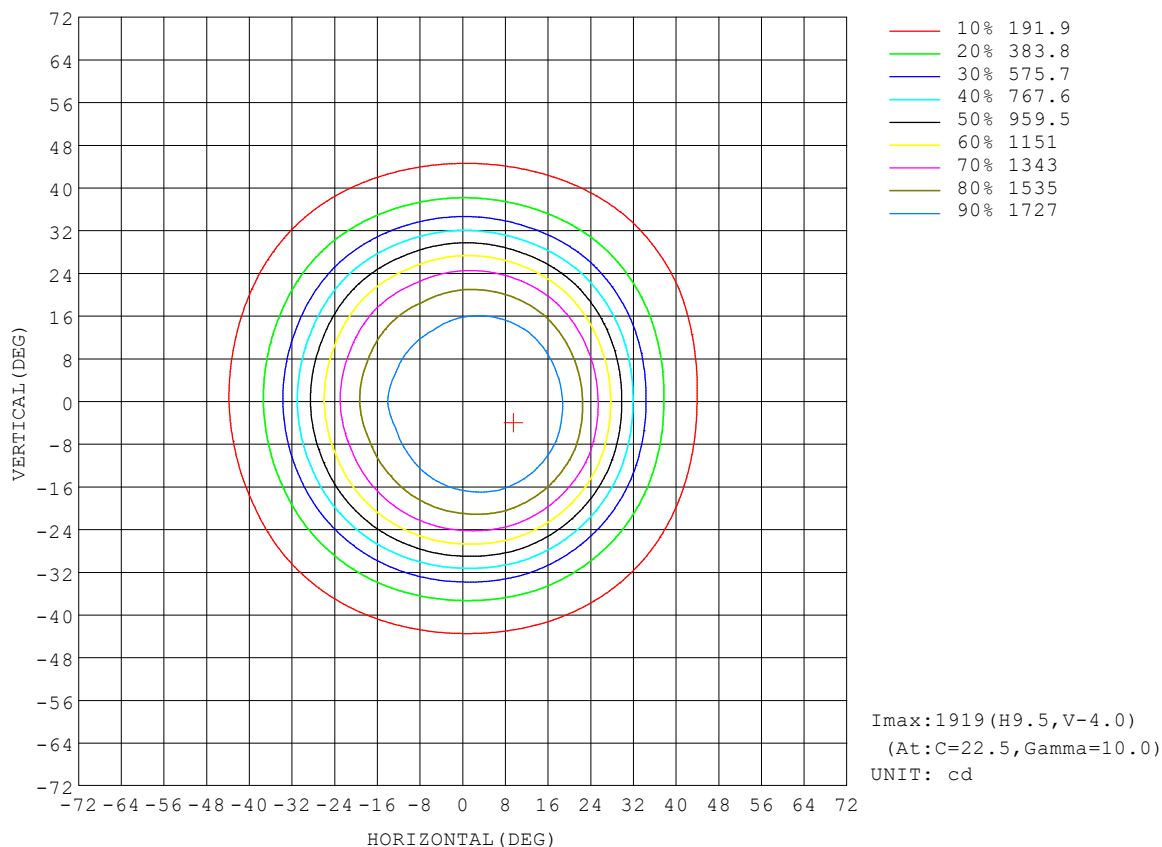
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	70	82	75	70	81	74	70	66
0.80	90	83	79	89	83	79	88	82	78	74
1.00	95	89	85	94	88	84	93	88	84	79
1.25	100	94	90	99	93	89	97	92	89	84
1.50	103	97	94	102	97	93	99	95	92	87
2.00	106	102	98	105	100	97	102	98	96	90
2.50	108	104	101	107	103	100	104	100	98	91
3.00	110	106	103	108	105	102	105	102	100	93
4.00	113	109	107	111	108	105	107	105	103	95
5.00	114	111	109	112	110	108	108	106	104	97
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: MEDIUM  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2021-03-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
Humidity: 65.0%  
Test Distance: 8.402m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

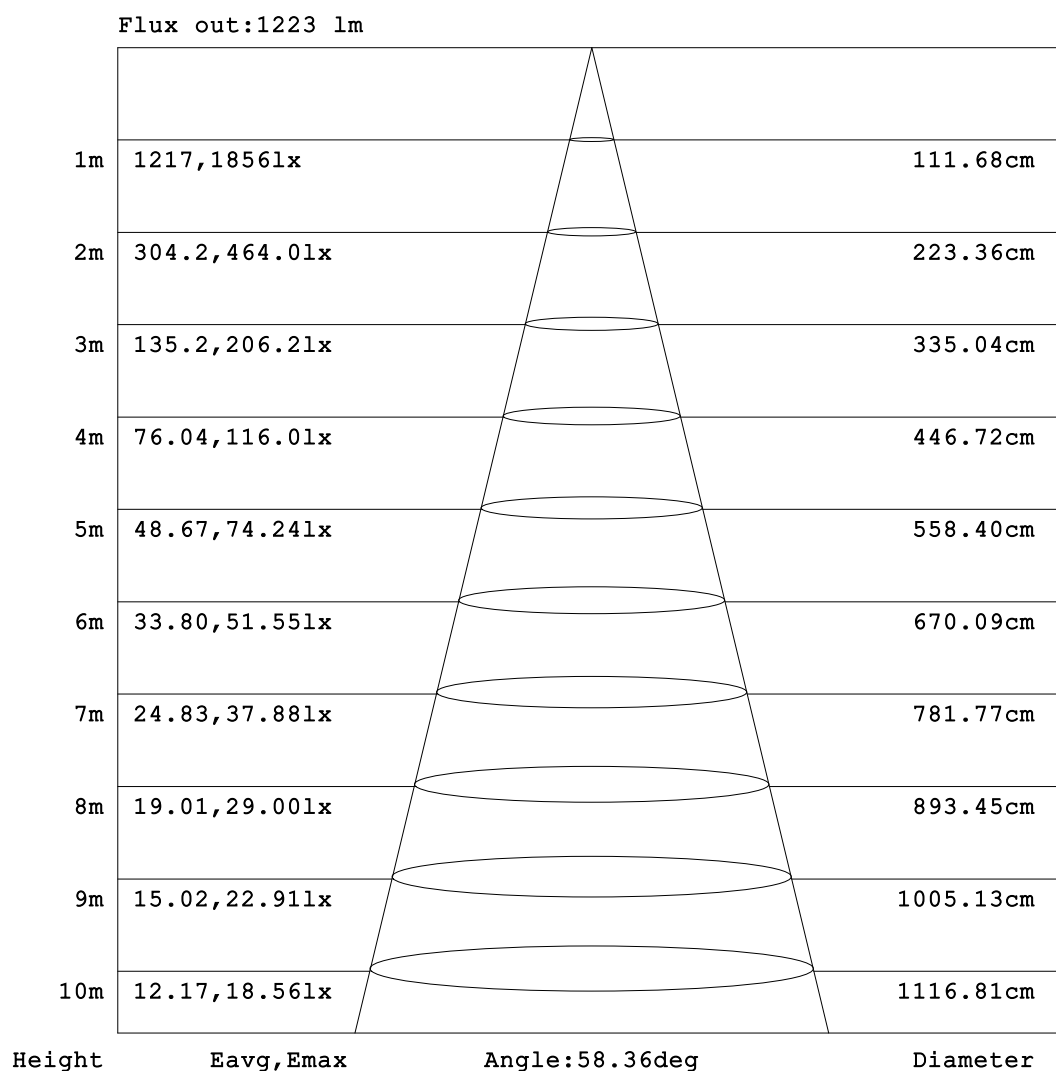


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-03-16

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

**AAI Figure**

NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:



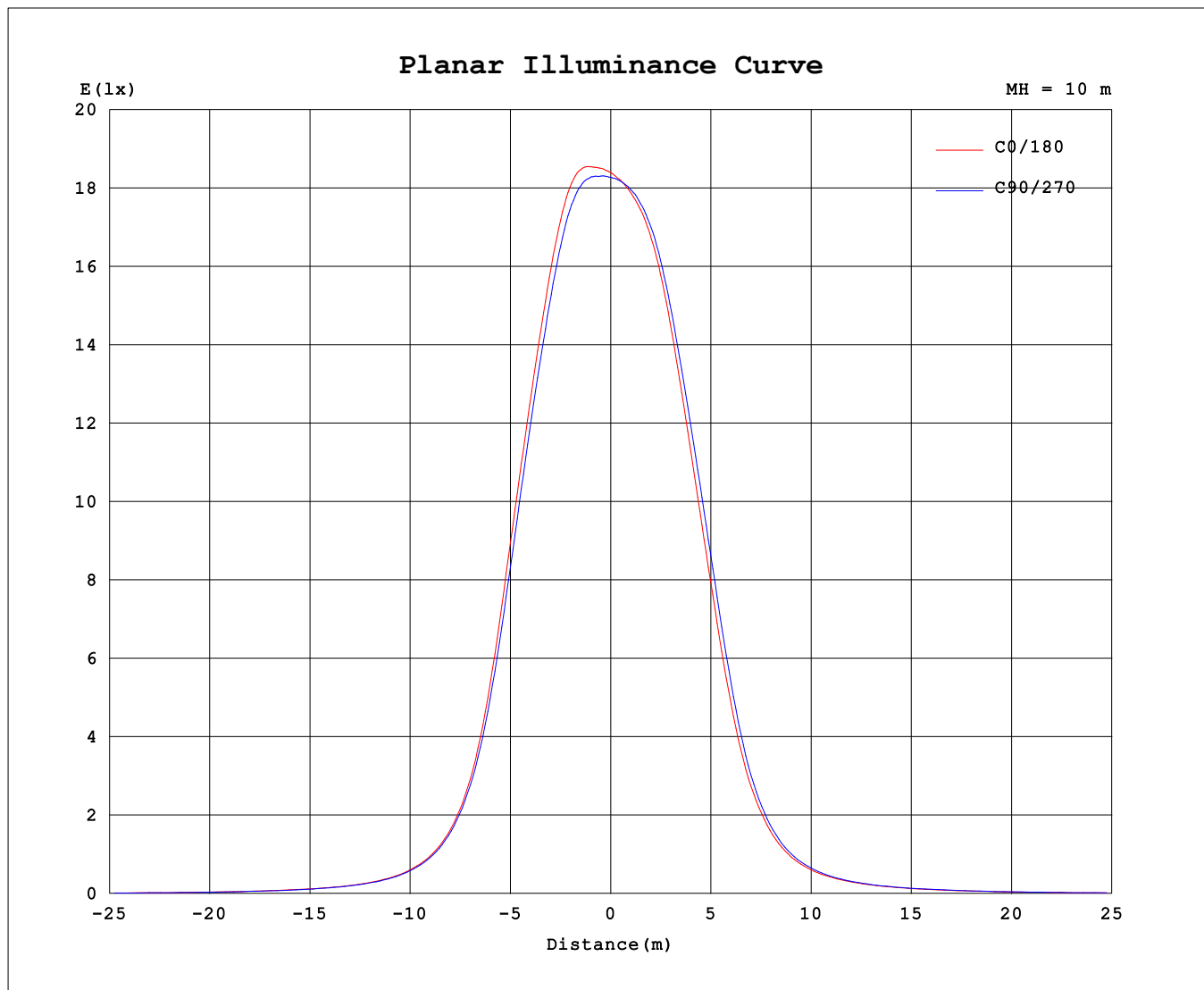
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2021-03-16

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:



### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2021-03-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.454  
 Humidity: 65.0%  
 Test Distance: 8.402m [K=1.0000]  
 Remarks:

NAME: TL45-20G40-60-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

UNIT: cd

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2021-03-16

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.454
Humidity:65.0%
Test Distance:8.402m [K=1.0000]
Remarks:

```