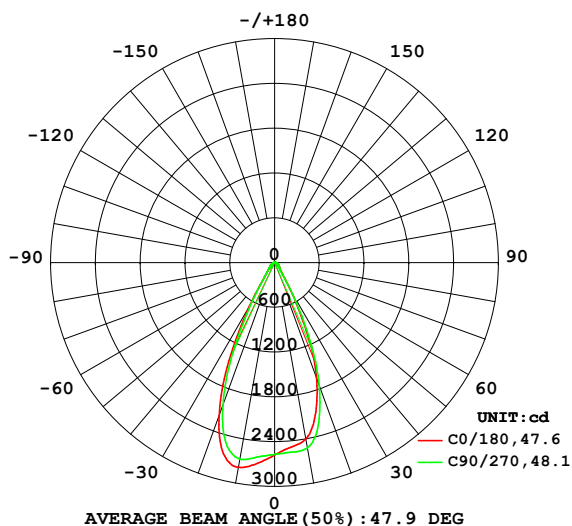


LUMINAIRE PHOTOMETRIC TEST REPORT

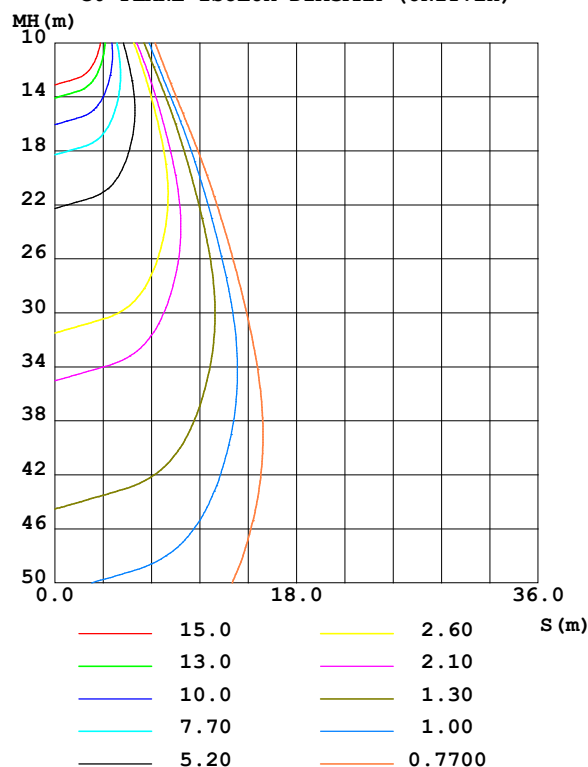
NAME: TL45-20G30-45-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 90.63 lm/W
MODEL	3000K CRI90	I _{max} (cd)	2856	S/MH(C0/180)	0.76	
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.74	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1767.2	η UP,DN(C0-180)	0.0,46.3	
NOMINAL FLUX(lm)	1767.22	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,53.7	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225	η down (%)	100.0	CIBSE SHR MAX	0.70	

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	2401	2440	2520	2626	2784	2852	2673	2505	0- 10	247.8	247.8	14,14
20	1648	1639	1747	1942	2179	2244	2029	1815	10- 20	653.2	901.0	51,51
30	443.7	423.1	466.4	541.0	677.9	681.7	611.4	522.0	20- 30	542.8	1444	81.7,81.7
40	112.1	105.9	99.58	105.9	139.5	148.4	141.8	131.5	30- 40	153.4	1597	90.4,90.4
50	59.26	56.67	56.51	58.18	78.86	80.63	79.75	74.63	40- 50	69.39	1667	94.3,94.3
60	36.04	34.69	34.74	36.01	49.74	50.30	49.81	46.84	50- 60	48.40	1715	97,97
70	19.83	19.12	19.06	19.98	29.23	29.73	29.07	27.34	60- 70	32.39	1747	98.9,98.9
80	3.749	3.478	3.542	3.918	9.177	9.516	9.235	8.501	70- 80	14.92	1762	99.7,99.7
90	2.988	3.014	2.946	2.862	5.217	5.217	5.091	4.943	80- 90	4.880	1767	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): 1635.5 lm

%lum = 92.5%

%lamp = 92.5%

Conical surface Flux(120deg): 1715 lm

%lum = 97.0%

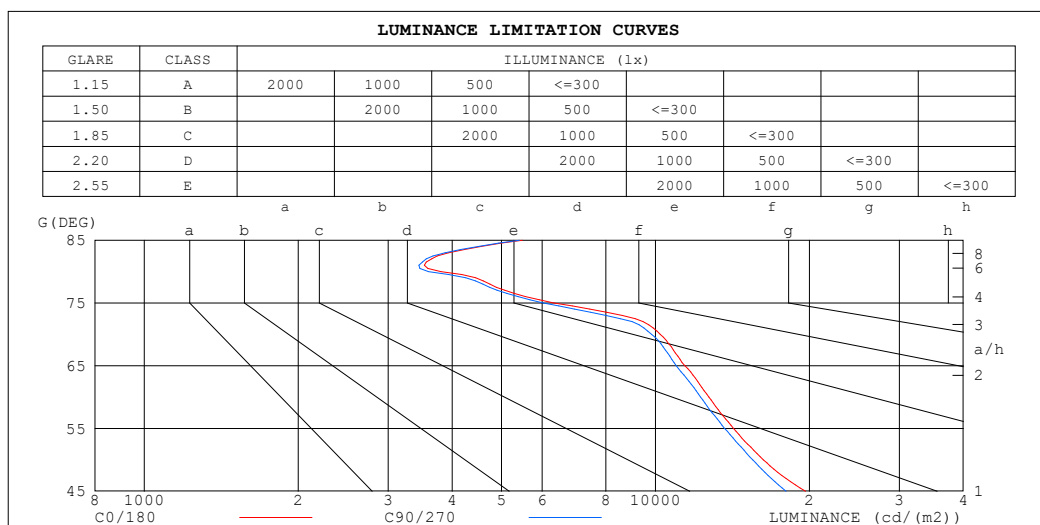
%lamp = 97.0%

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: TL45-20G30-45-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	5492	5418
80	3807	3598
75	6328	6038
70	10223	9830
65	11412	10982
60	12712	12255
55	14207	13652
50	16259	15506
45	19650	18005

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: TL45-20G30-45-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	.178	.101	.032	.171	.098	.031	.159	.091	.029	.147	.085	.027	.137	.079	.026		
2.0	.168	.092	.028	.162	.089	.028	.152	.084	.026	.142	.080	.025	.133	.075	.024		
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.075	.023	.128	.071	.022		
4.0	.149	.078	.023	.145	.076	.022	.137	.073	.022	.130	.070	.021	.123	.067	.020		
5.0	.141	.072	.021	.137	.071	.021	.131	.068	.020	.124	.066	.020	.119	.063	.019		
6.0	.134	.067	.019	.131	.066	.019	.125	.064	.019	.119	.062	.018	.114	.060	.018		
7.0	.127	.063	.018	.124	.062	.018	.119	.060	.017	.114	.059	.017	.110	.057	.017		
8.0	.121	.059	.017	.119	.058	.017	.114	.057	.016	.110	.056	.016	.106	.054	.016		
9.0	.116	.056	.016	.114	.055	.016	.109	.054	.015	.106	.053	.015	.102	.052	.015		
10.0	.111	.053	.015	.109	.053	.015	.105	.052	.015	.102	.051	.014	.098	.050	.014		

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011		
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.026	.015	.011	.009		
5.0	.123	.087	.060	.106	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007		
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.019	.013	.009	.006		
7.0	.108	.070	.043	.093	.061	.037	.064	.042	.027	.037	.025	.016	.012	.008	.005		
8.0	.102	.064	.037	.088	.055	.032	.061	.039	.023	.035	.023	.014	.011	.007	.005		
9.0	.097	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004		
10.0	.092	.054	.028	.080	.047	.025	.055	.033	.017	.032	.019	.010	.010	.006	.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: TL45-20G30-45-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	14.6	15.5	14.8	15.7	15.8	14.3	15.2	14.5	15.4	15.6
	3H	15.4	16.2	15.7	16.4	16.6	15.1	16.0	15.4	16.2	16.4
	4H	15.6	16.4	15.9	16.6	16.8	15.3	16.1	15.6	16.3	16.6
	6H	15.6	16.4	15.9	16.6	16.8	15.3	16.1	15.6	16.3	16.6
	8H	15.6	16.3	15.9	16.6	16.8	15.3	16.0	15.6	16.3	16.6
	12H	15.6	16.3	15.9	16.5	16.8	15.3	16.0	15.6	16.3	16.6
4H	2H	14.9	15.7	15.2	15.9	16.1	14.7	15.4	14.9	15.7	15.9
	3H	15.9	16.6	16.2	16.8	17.1	15.6	16.3	16.0	16.6	16.9
	4H	16.1	16.7	16.4	17.0	17.3	15.9	16.5	16.2	16.8	17.1
	6H	16.1	16.7	16.5	17.0	17.4	15.9	16.5	16.3	16.8	17.1
	8H	16.1	16.6	16.5	17.0	17.4	15.9	16.4	16.3	16.8	17.1
	12H	16.1	16.6	16.6	17.0	17.4	15.9	16.4	16.3	16.8	17.2
8H	4H	16.1	16.6	16.5	17.0	17.3	15.9	16.4	16.3	16.8	17.1
	6H	16.2	16.6	16.6	17.0	17.4	16.0	16.4	16.4	16.8	17.2
	8H	16.2	16.6	16.6	17.0	17.4	16.0	16.3	16.4	16.8	17.2
	12H	16.2	16.6	16.7	17.0	17.5	16.0	16.4	16.5	16.8	17.3
12H	4H	16.1	16.5	16.5	16.9	17.3	15.8	16.3	16.3	16.7	17.1
	6H	16.1	16.5	16.6	16.9	17.4	15.9	16.3	16.4	16.7	17.2
	8H	16.2	16.5	16.6	16.9	17.4	15.9	16.3	16.4	16.7	17.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.6 / - 0.8					+ 0.5 / - 0.7				
1.5H		+ 0.9 / - 0.5					+ 0.6 / - 0.4				
2.0H		+ 1.0 / - 0.7					+ 0.9 / - 0.6				

CIE Pub.117, 1767 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.0)
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: TL45-20G30-45-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

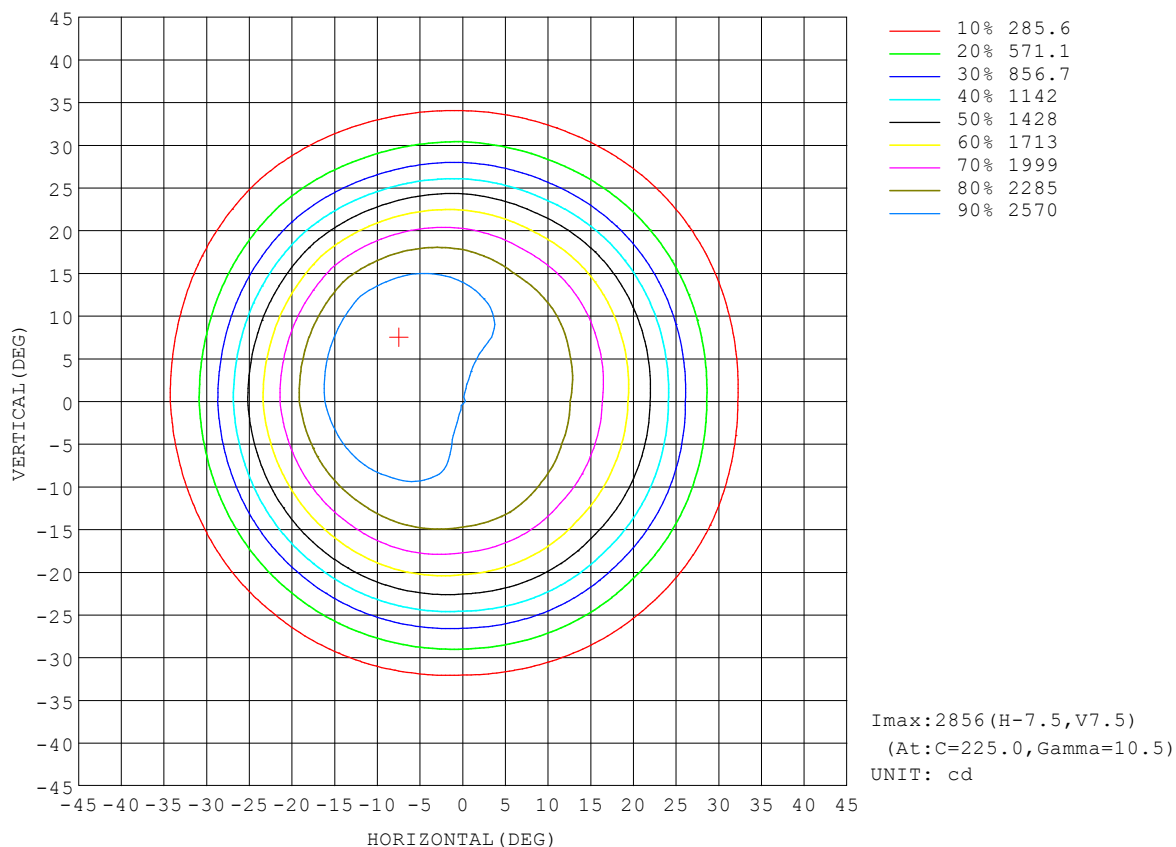
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	84	78	75	71
0.80	93	87	83	92	87	83	91	86	82	79
1.00	98	92	88	97	91	88	95	91	87	83
1.25	102	96	93	101	96	92	99	95	91	87
1.50	105	100	96	103	99	96	101	97	94	90
2.00	108	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	112	110	109	108	107	106	98
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

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:

ISOCANDELA DIAGRAM

NAME: TL45-20G30-45-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

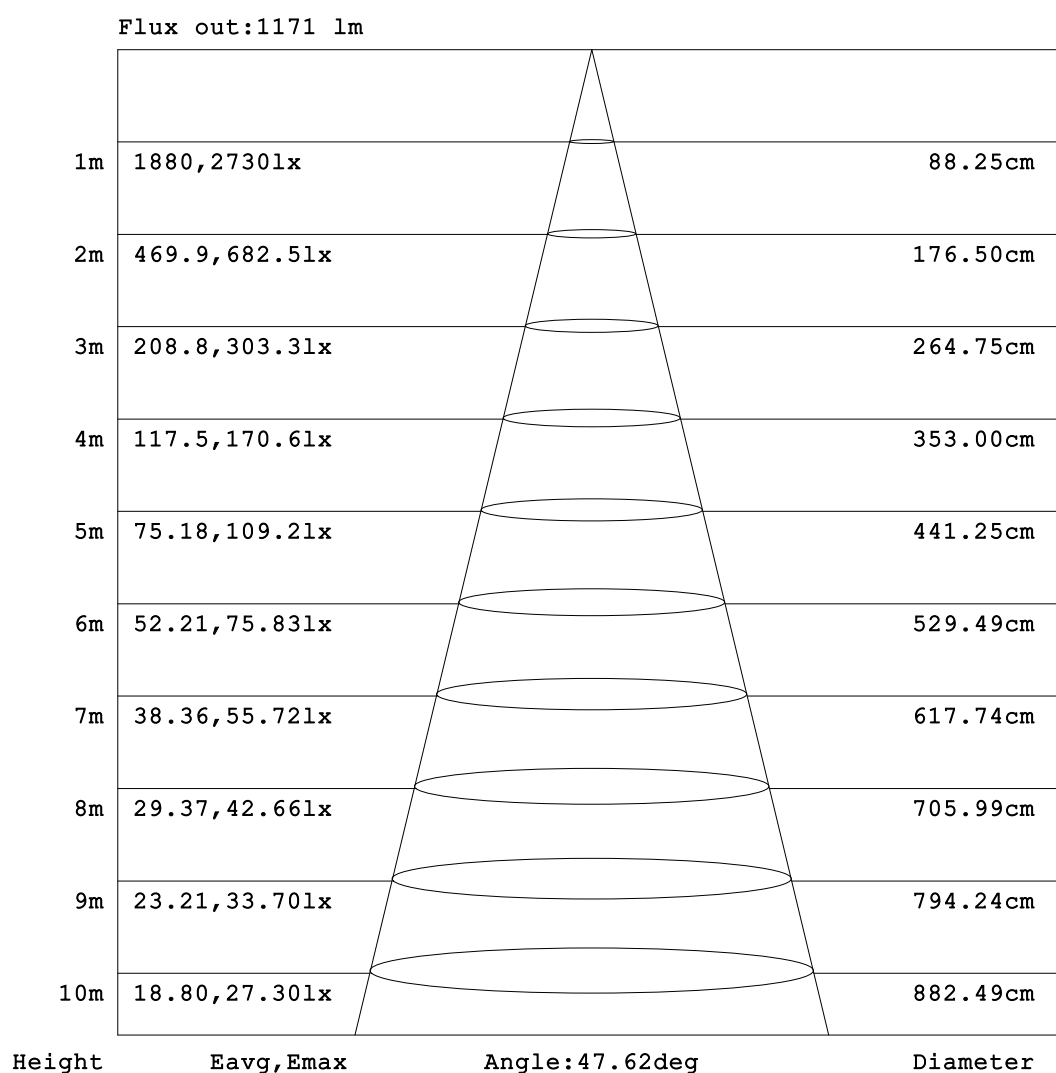


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-03-16

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: TL45-20G30-45-M	TYPE:	WEIGHT:
SPEC.: 36V&500mA	DIM.: D90*H40	SERIAL No.:
MFR.: EVERFINE	SUR.: D85	Shielding Angle:

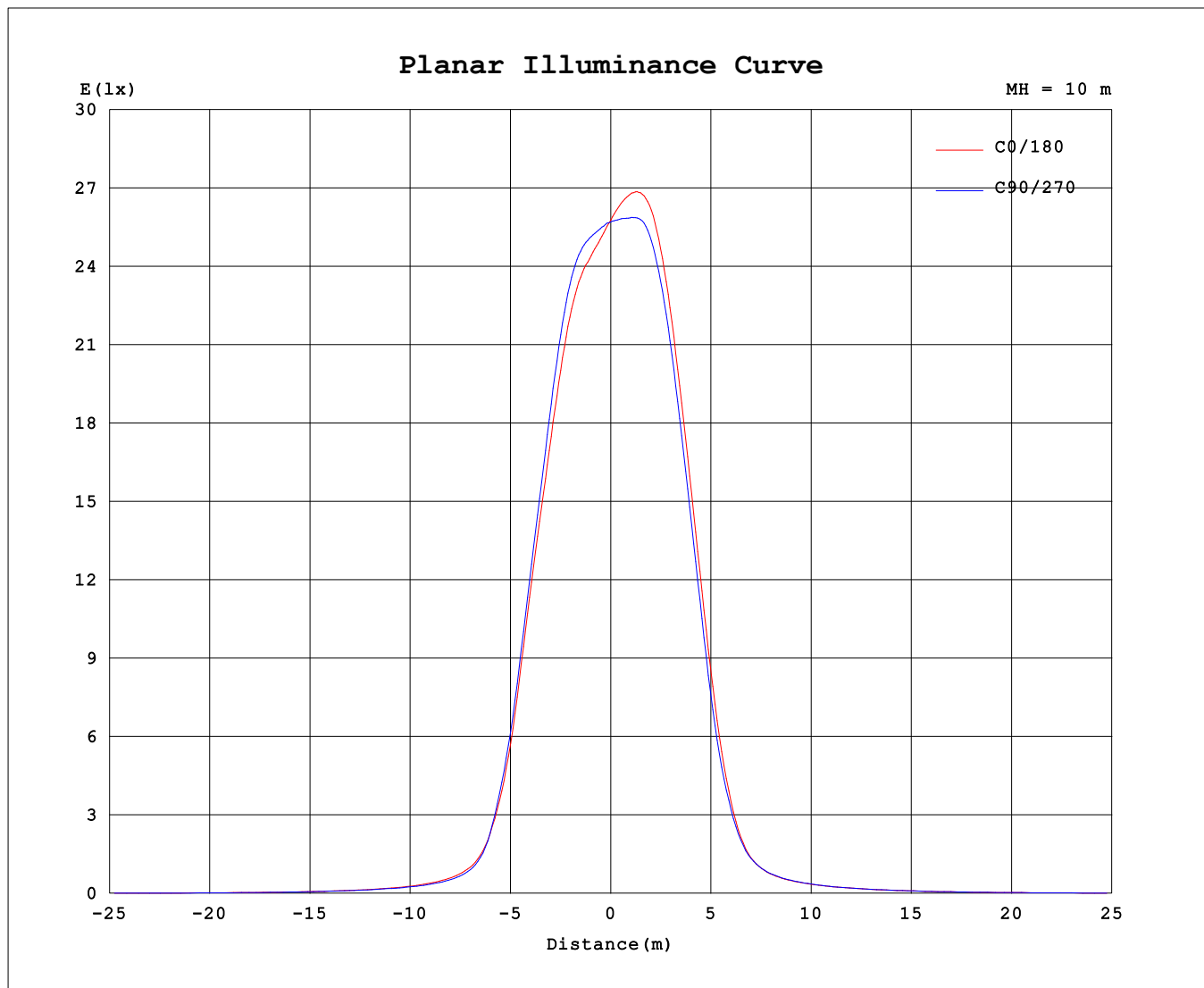


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:

NAME: TL45-20G30-45-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:

```