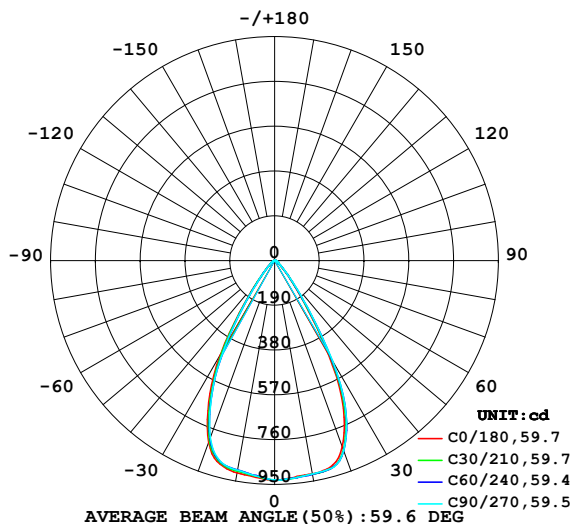


LUMINAIRE PHOTOMETRIC TEST REPORT

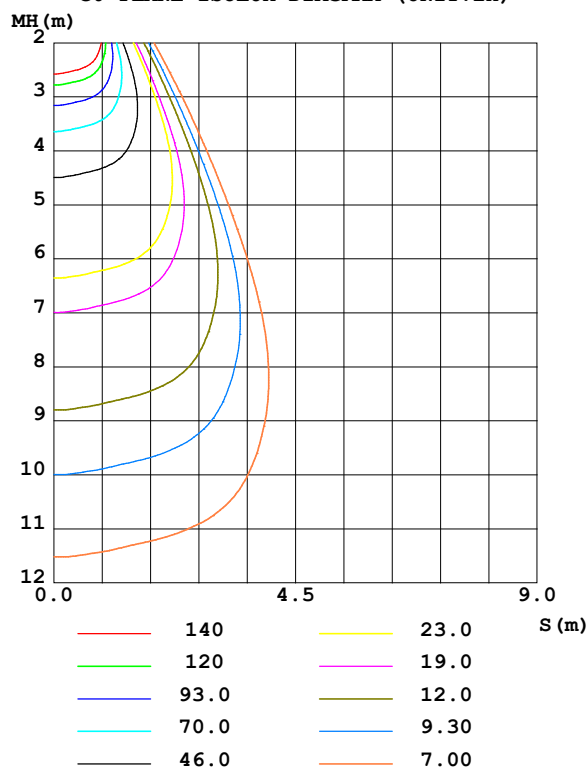
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 82.26 lm/W
MODEL	TL45-11G27-60-S	Imax (cd)	931.6	S/MH(C0/180)	0.87	
NOMINAL POWER(W)	11	LOR(%)	76.8	S/MH(C90/270)	0.86	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	871.94	$\eta$ UP,DN(C0-180)	0.0,39.8	
NOMINAL FLUX(lm)	1134.94	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,37.0	
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	230	$\eta$ down (%)	76.8	CIBSE SHR MAX	0.90	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-10-29

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

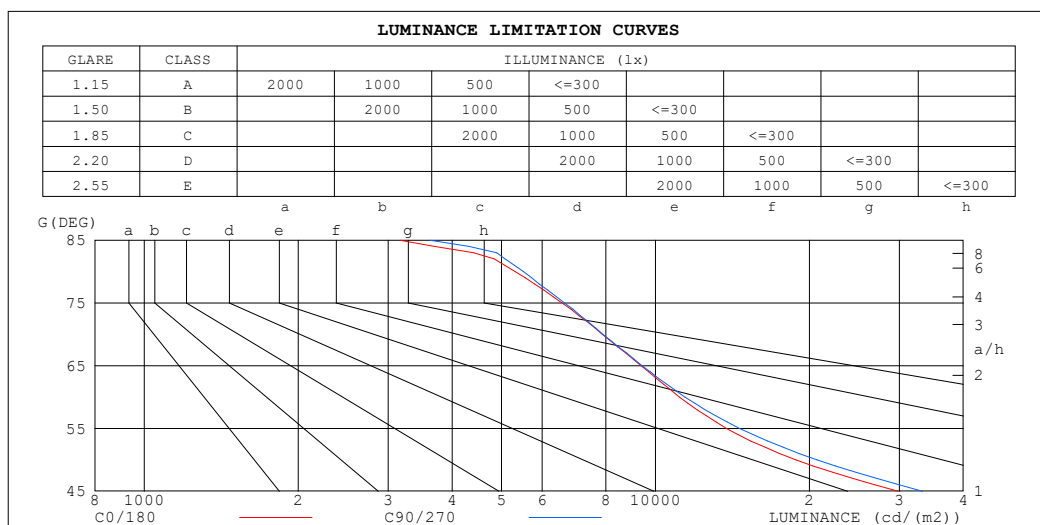
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	918.4	920.2	919.7	920.3	914.8	903.7	903.2	908.1	0- 10	87.72	87.72	10.1,7.73
20	840.4	859.7	857.5	844.8	820.4	799.8	799.3	807.4	10- 20	251.2	338.9	38.9,29.9
30	455.0	491.4	491.4	488.0	461.1	428.1	425.0	427.0	20- 30	302.8	641.8	73.6,56.5
40	106.8	118.9	121.4	116.1	104.8	94.88	95.52	97.40	30- 40	150.8	792.5	90.9,69.8
50	32.04	35.12	35.13	33.62	29.81	26.59	27.52	28.75	40- 50	45.38	837.9	96.1,73.8
60	14.73	15.37	15.06	14.51	13.28	12.13	12.46	12.96	50- 60	18.46	856.4	98.2,75.5
70	7.124	7.320	7.127	6.988	6.685	6.155	6.220	6.371	60- 70	9.860	866.2	99.3,76.3
80	2.443	2.502	2.531	2.530	2.400	2.241	2.203	2.180	70- 80	4.642	870.9	99.9,76.7
90	0.4275	0.4266	0.4226	0.4339	0.2431	0.2465	0.2700	0.2502	80- 90	1.077	871.9	100,76.8
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		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-10-29

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

# LUMINANCE LIMITATION CURVES

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3162	3624
80	5318	5522
75	6560	6640
70	7873	7894
65	9369	9408
60	11137	11413
55	13778	14616
50	18838	20703
45	29812	33272

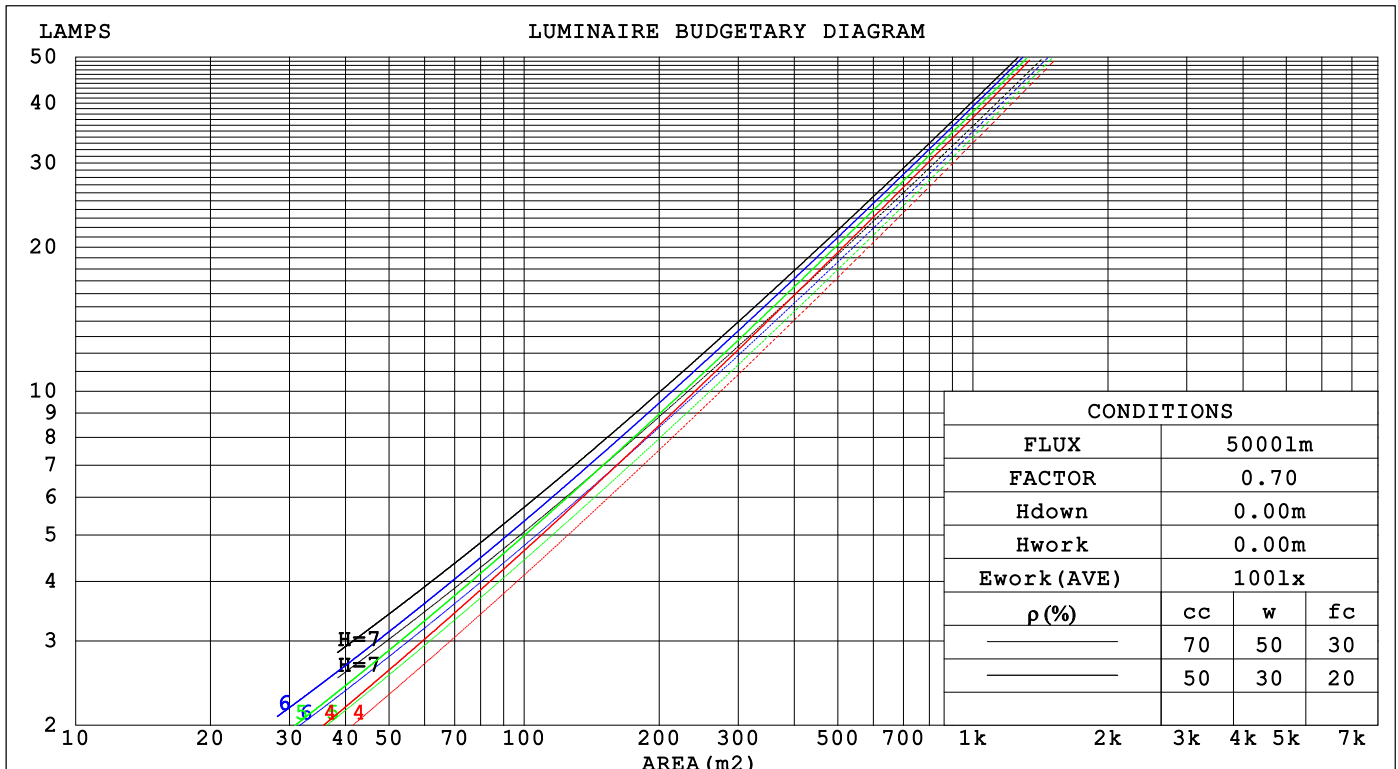
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-10-29

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 7.240m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding 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						Coefficients of Utilization(CU)									
0.0	.91	.91	.91	.89	.89	.89	.85	.85	.85	.82	.82	.82	.78	.78	.78	.77
1.0	.85	.83	.81	.83	.81	.80	.80	.79	.77	.77	.76	.75	.75	.74	.73	.72
2.0	.79	.76	.73	.78	.75	.72	.75	.73	.71	.73	.71	.69	.71	.69	.68	.66
3.0	.73	.70	.66	.72	.69	.66	.70	.67	.65	.68	.66	.64	.67	.65	.63	.62
4.0	.69	.64	.61	.68	.64	.61	.66	.63	.60	.65	.62	.59	.63	.61	.59	.57
5.0	.64	.60	.56	.64	.59	.56	.62	.58	.56	.61	.58	.55	.60	.57	.55	.54
6.0	.60	.56	.52	.60	.55	.52	.59	.55	.52	.57	.54	.51	.56	.53	.51	.50
7.0	.57	.52	.49	.56	.52	.49	.55	.51	.48	.54	.51	.48	.53	.50	.48	.47
8.0	.54	.49	.46	.53	.49	.46	.52	.48	.45	.51	.48	.45	.51	.47	.45	.44
9.0	.51	.46	.43	.50	.46	.43	.49	.45	.43	.49	.45	.43	.48	.45	.42	.41
10.0	.48	.43	.40	.48	.43	.40	.47	.43	.40	.46	.43	.40	.46	.42	.40	.39



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-10-29

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## WEC AND CCEC

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	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
pf <sub>c</sub>	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Wall Exitance Coefficients(WEC)
0.0						
1.0	.140 .080 .025	.135 .077 .025	.126 .072 .023	.117 .067 .022	.108 .063 .020	
2.0	.134 .074 .023	.130 .071 .022	.122 .068 .021	.114 .064 .020	.107 .061 .019	
3.0	.127 .068 .020	.124 .066 .020	.117 .063 .019	.110 .060 .019	.104 .058 .018	
4.0	.121 .063 .018	.118 .062 .018	.112 .059 .018	.106 .057 .017	.101 .055 .017	
5.0	.115 .059 .017	.112 .058 .017	.107 .056 .016	.102 .054 .016	.098 .052 .016	
6.0	.110 .055 .016	.107 .054 .016	.103 .053 .015	.098 .051 .015	.094 .050 .015	
7.0	.105 .052 .015	.102 .051 .015	.098 .050 .014	.094 .048 .014	.091 .047 .014	
8.0	.100 .049 .014	.098 .048 .014	.094 .047 .013	.091 .046 .013	.088 .045 .013	
9.0	.096 .046 .013	.094 .046 .013	.091 .045 .013	.088 .044 .013	.085 .043 .012	
10.0	.092 .044 .012	.090 .044 .012	.087 .043 .012	.084 .042 .012	.082 .041 .012	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pf <sub>c</sub>	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Ceiling Cavity Exitance Coefficients(CCEC)
0.0	.146 .146 .146	.125 .125 .125	.085 .085 .085	.049 .049 .049	.016 .016 .016	
1.0	.132 .121 .111	.113 .104 .095	.077 .071 .066	.044 .041 .038	.014 .013 .012	
2.0	.120 .102 .086	.103 .088 .075	.071 .061 .052	.041 .035 .030	.013 .011 .010	
3.0	.111 .087 .068	.095 .075 .059	.065 .052 .042	.038 .031 .025	.012 .010 .008	
4.0	.103 .076 .055	.089 .066 .048	.061 .046 .034	.035 .027 .020	.011 .009 .007	
5.0	.097 .067 .045	.083 .058 .040	.057 .041 .028	.033 .024 .017	.011 .008 .005	
6.0	.091 .060 .038	.078 .052 .033	.054 .036 .023	.031 .021 .014	.010 .007 .005	
7.0	.086 .054 .032	.074 .047 .028	.051 .033 .020	.030 .019 .012	.010 .006 .004	
8.0	.081 .049 .027	.070 .043 .024	.049 .030 .017	.028 .018 .010	.009 .006 .003	
9.0	.078 .045 .024	.067 .039 .021	.046 .028 .015	.027 .016 .009	.009 .005 .003	
10.0	.074 .042 .021	.064 .037 .018	.044 .026 .013	.026 .015 .008	.008 .005 .003	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-10-29

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

NAME:	TYPE:					WEIGHT:				
SPEC.:	DIM.:					SERIAL No.:				
MFR.:	SUR.: 58					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	19.7	20.7	20.0	20.9	21.0	20.1	21.1	20.4	21.3	21.4
3H	19.8	20.7	20.0	20.9	21.1	20.2	21.1	20.4	21.3	21.5
4H	19.8	20.6	20.1	20.9	21.1	20.2	21.0	20.5	21.2	21.5
6H	19.8	20.6	20.1	20.8	21.1	20.2	20.9	20.5	21.2	21.4
8H	19.8	20.5	20.1	20.8	21.0	20.1	20.9	20.4	21.1	21.4
12H	19.7	20.5	20.0	20.7	21.0	20.1	20.8	20.4	21.1	21.4
4H 2H	19.6	20.5	19.9	20.7	20.9	20.0	20.9	20.3	21.1	21.3
3H	19.8	20.5	20.1	20.8	21.0	20.1	20.8	20.4	21.1	21.4
4H	19.8	20.5	20.2	20.8	21.1	20.2	20.8	20.5	21.1	21.4
6H	19.8	20.4	20.2	20.7	21.1	20.2	20.8	20.6	21.1	21.4
8H	19.8	20.4	20.2	20.7	21.1	20.2	20.7	20.6	21.1	21.4
12H	19.8	20.3	20.2	20.7	21.0	20.1	20.6	20.6	21.0	21.4
8H 4H	19.8	20.3	20.1	20.6	21.0	20.1	20.6	20.5	21.0	21.3
6H	19.8	20.2	20.2	20.6	21.1	20.1	20.6	20.6	21.0	21.4
8H	19.8	20.2	20.3	20.6	21.1	20.1	20.5	20.6	21.0	21.4
12H	19.8	20.1	20.3	20.6	21.0	20.1	20.5	20.6	20.9	21.4
12H 4H	19.7	20.2	20.1	20.6	21.0	20.1	20.5	20.5	20.9	21.3
6H	19.8	20.2	20.2	20.6	21.0	20.1	20.5	20.6	20.9	21.4
8H	19.8	20.1	20.3	20.6	21.0	20.1	20.5	20.6	20.9	21.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.0 / - 3.0					+ 2.3 / - 3.2				
1.5H	+ 3.6 / - 2.5					+ 3.9 / - 2.7				
2.0H	+ 2.6 / - 1.5					+ 2.9 / - 1.6				

CIE Pub.117, 1135 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.4$ )  
Area: 0.00264 m<sup>2</sup>

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-10-29

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:

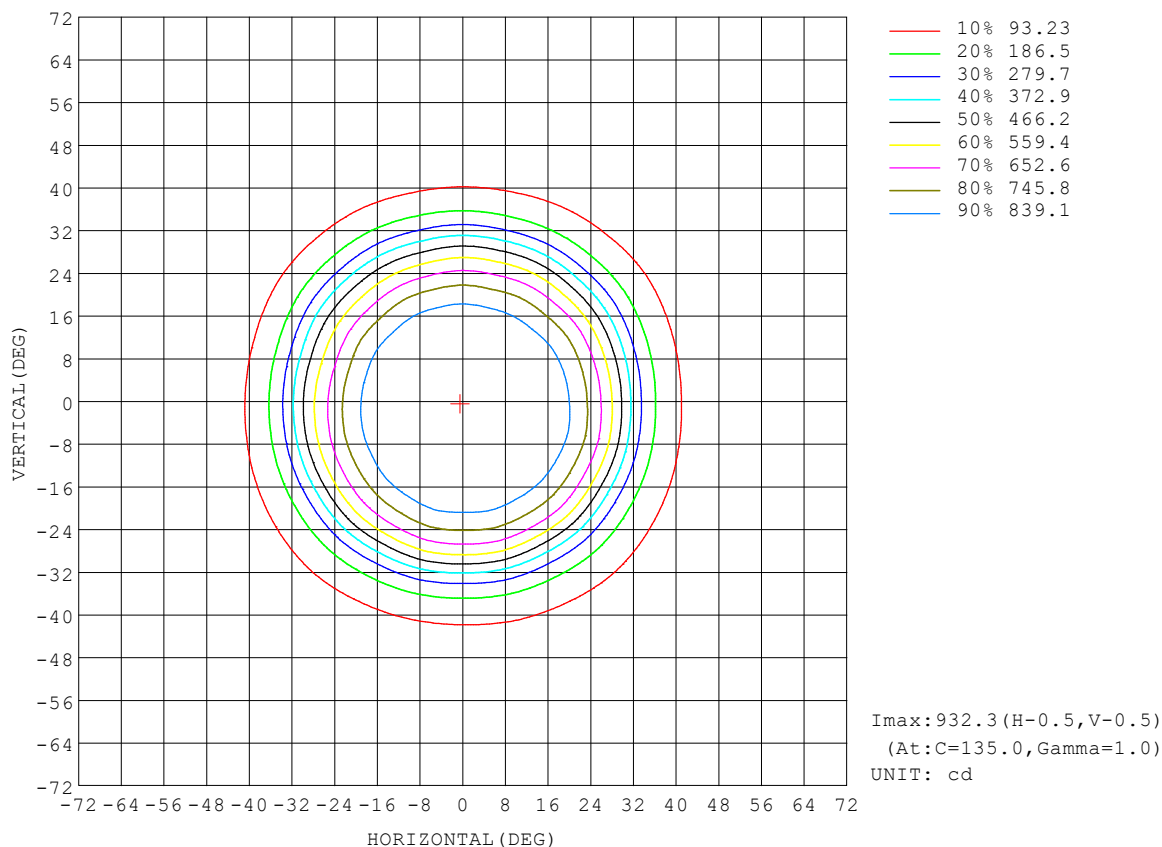
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	66	61	58	66	61	58	65	60	58	55
0.80	72	67	64	71	67	64	70	66	64	61
1.00	75	71	68	75	71	68	73	70	67	64
1.25	79	74	72	78	74	71	76	73	71	67
1.50	81	77	74	80	76	74	78	75	73	70
2.00	83	80	77	82	79	76	80	77	75	71
2.50	84	81	79	83	80	78	81	78	77	72
3.00	86	83	81	84	82	80	82	80	78	73
4.00	87	85	83	86	84	82	83	81	80	75
5.00	88	86	85	87	85	84	83	82	81	75
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-10-29

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

NAME :	TYPE :	WEIGHT :
SPEC. :	DIM. :	SERIAL No. :
MFR. :	SUR. : 58	Shielding Angle :



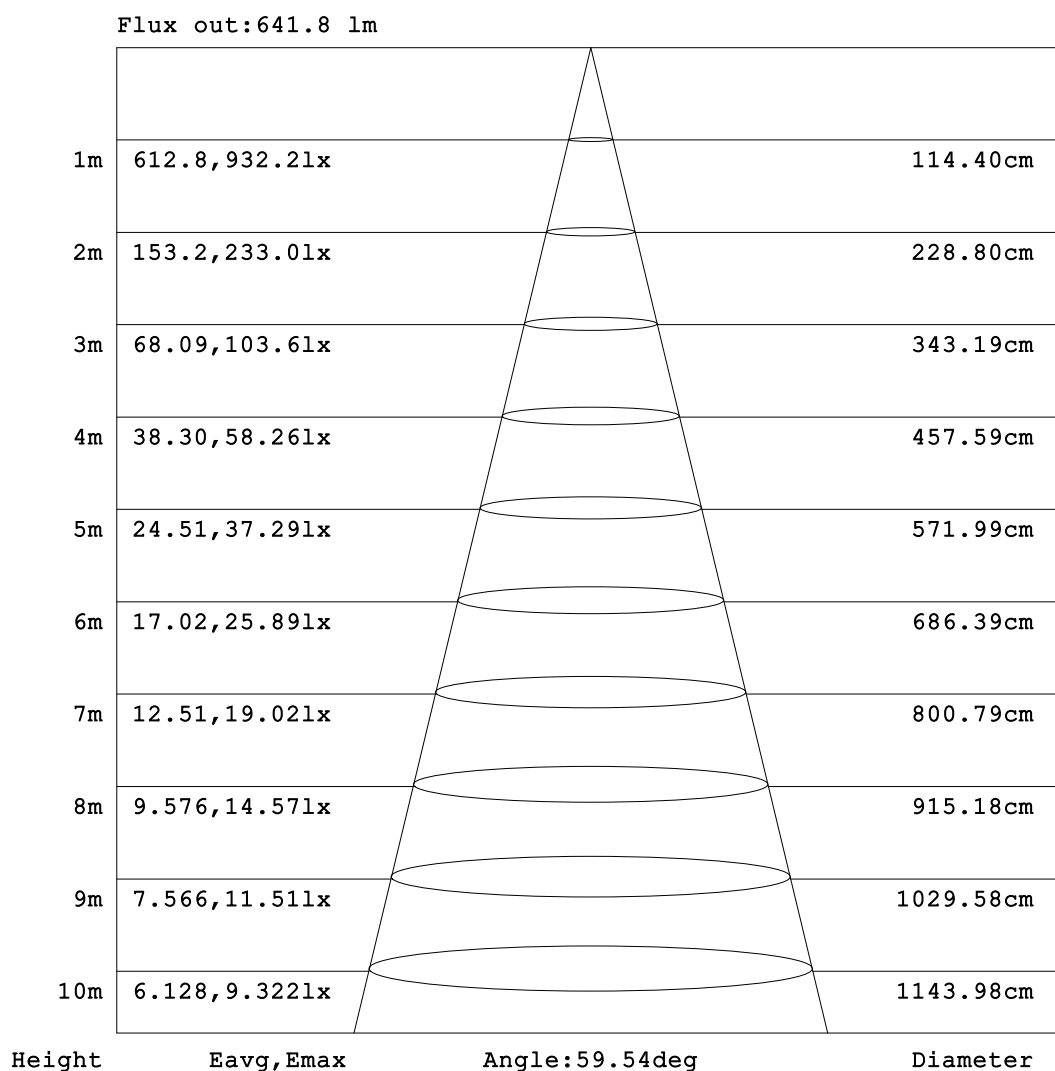
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-10-29

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:



### AAI Figure

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:



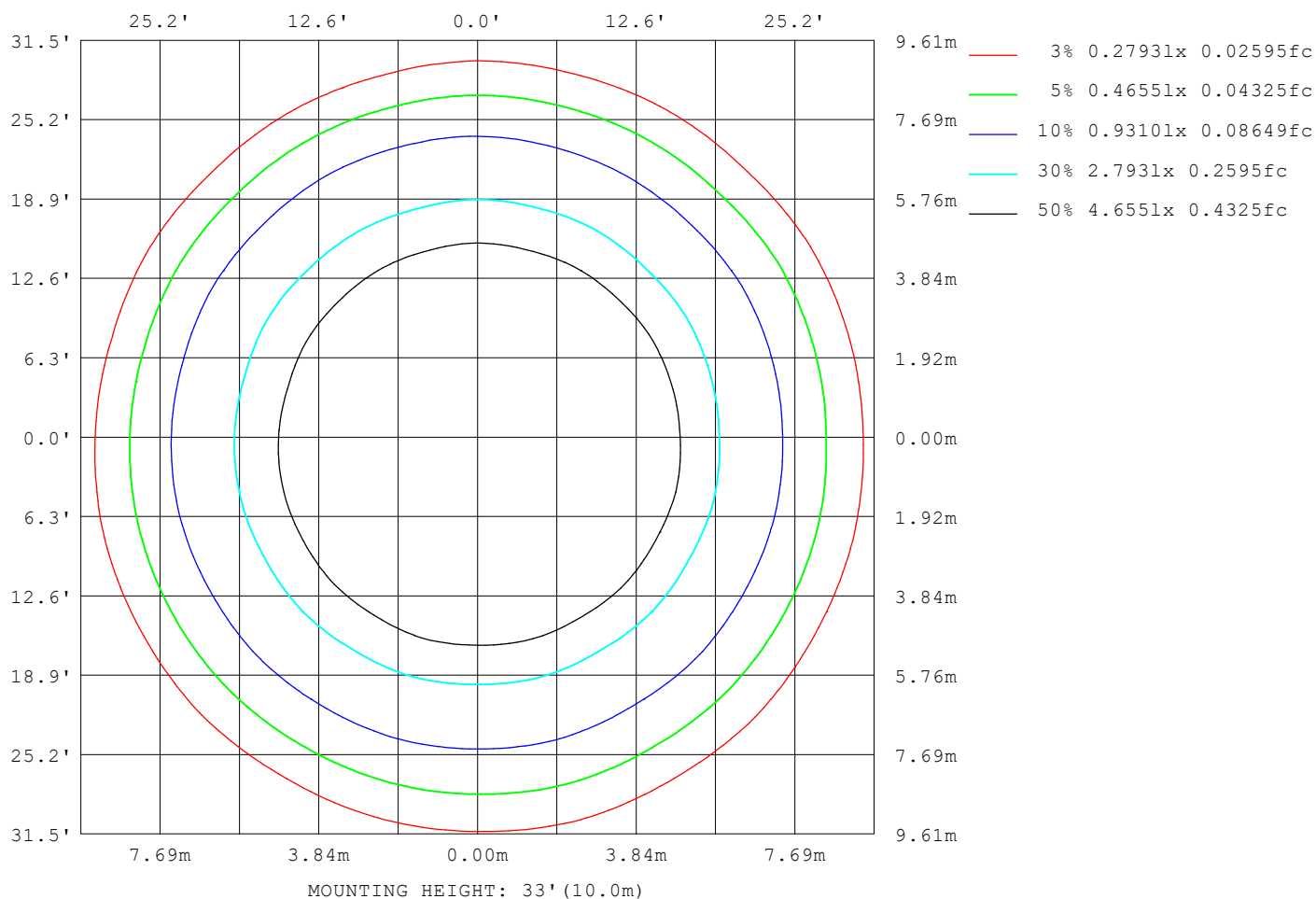
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-10-29

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-10-29

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

### LED Avg.L Report

NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:

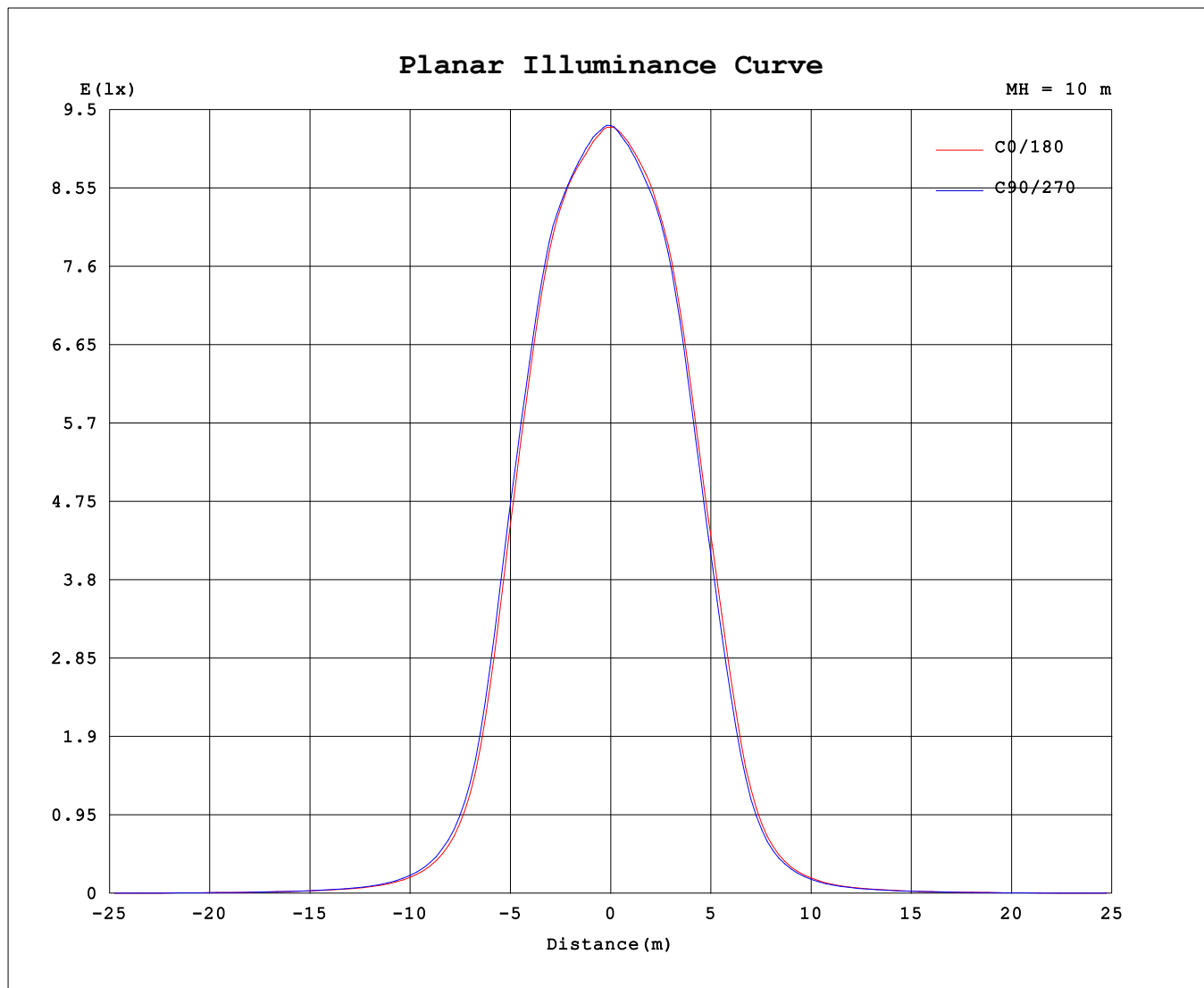
AvgL	cd/m2
L_0~180 (65) av	8982
L_0~180 (75) av	6452
L_0~180 (85) av	3264
L_90~270 (65) av	8716
L_90~270 (75) av	6246
L_90~270 (85) av	3251
L_45 (65) av	8737
L_45 (75) av	6262
L_45 (85) av	3205

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-10-29

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-10-29

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 7.240m [K=1.0000]  
 Remarks:

NAME :	TYPE :	WEIGHT :
SPEC. :	DIM. :	SERIAL No. :
MFR. :	SUR. : 58	Shielding Angle :

UNIT: cd

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-10-29

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```