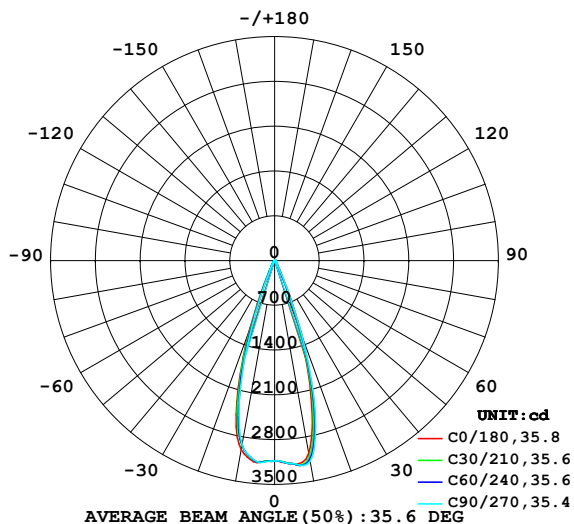


LUMINAIRE PHOTOMETRIC TEST REPORT

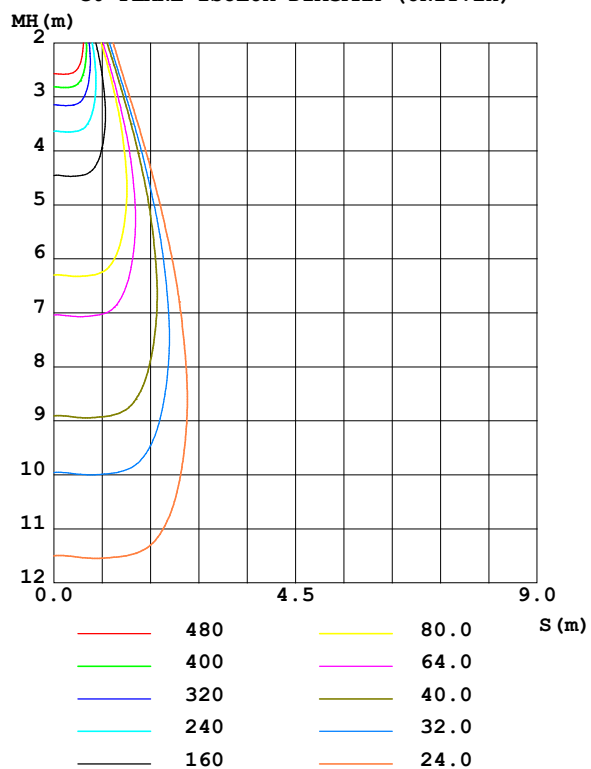
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 77.70 lm/W
MODEL	TL45-15G27-36-S	Imax (cd)	3235	S/MH (C0/180)	0.54	
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.51	
RATED VOLTAGE (V)	220-240	TOTAL FLUX (lm)	1165.5	$\eta$ UP, DN (C0-180)	0.0, 52.9	
NOMINAL FLUX (lm)	1165.54	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 47.1	
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE (V)	230	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.50	

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:

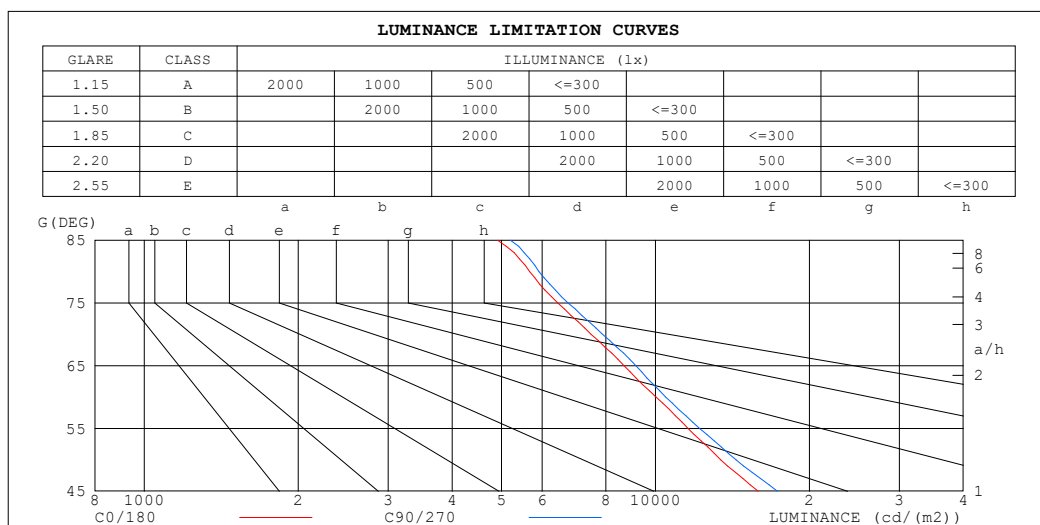
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	3066	3154	3190	3109	3002	2921	2926	2972	0- 10	299.4	299.4	25.7,25.7
20	1071	1227	1261	1273	1149	954.9	894.4	906.4	10- 20	590.5	890.0	76.4,76.4
30	121.2	131.5	133.8	131.5	115.5	101.5	102.3	112.8	20- 30	178.3	1068	91.7,91.7
40	41.61	42.71	45.10	46.03	41.17	37.18	38.51	39.67	30- 40	43.46	1112	95.4,95.4
50	22.48	23.27	24.50	24.04	21.95	19.01	19.77	20.48	40- 50	23.01	1135	97.4,97.4
60	13.06	13.59	13.88	13.54	12.86	11.61	11.78	12.27	50- 60	15.25	1150	98.7,98.7
70	6.666	7.020	7.146	7.065	6.897	6.382	6.423	6.438	60- 70	9.495	1160	99.5,99.5
80	2.567	2.638	2.723	2.694	2.571	2.363	2.342	2.360	70- 80	4.715	1164	99.9,99.9
90	0.7297	0.7243	0.6876	0.7334	0.3282	0.3310	0.3301	0.3273	80- 90	1.286	1166	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		

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	4913	5203
80	5675	5915
75	6445	6749
70	7482	7881
65	8680	9151
60	10026	10471
55	11579	12208
50	13425	14376
45	15873	17326

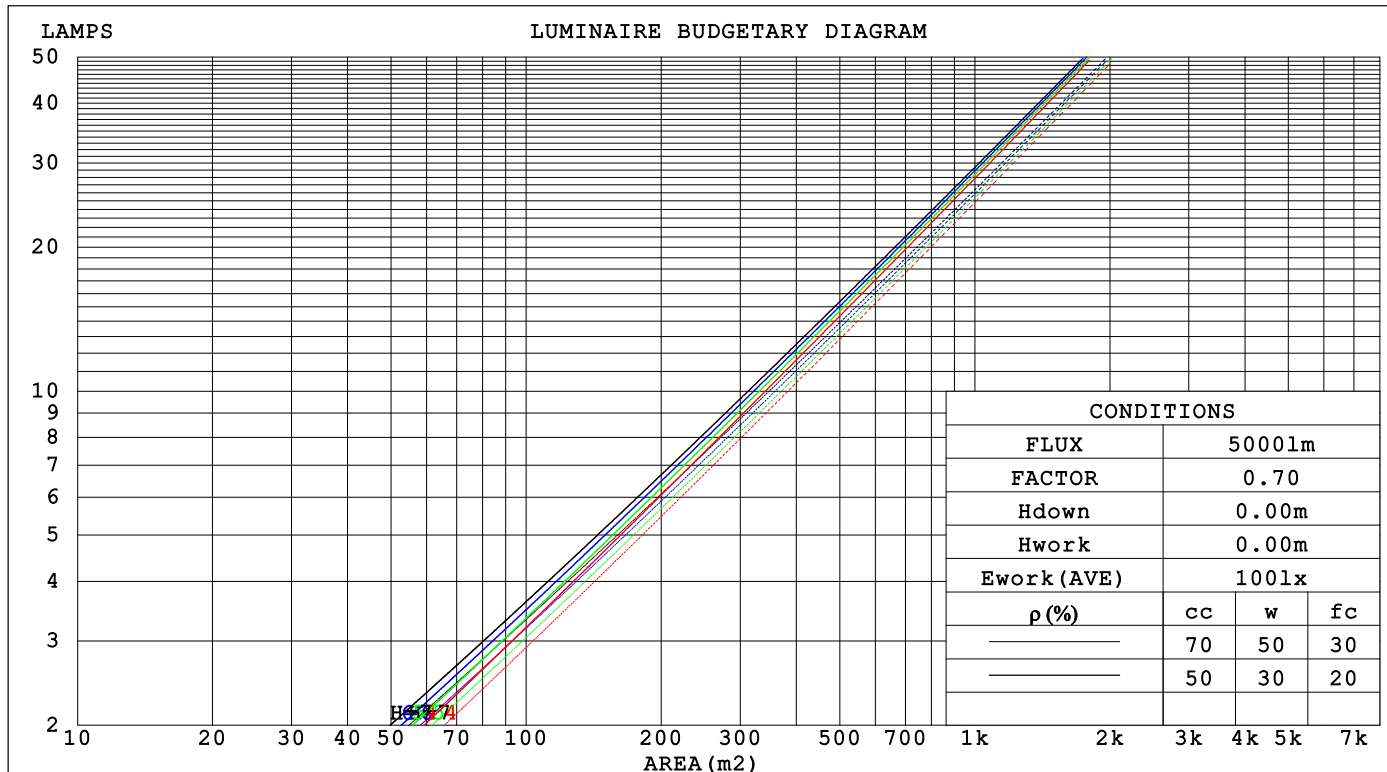
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-10-29

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:

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															



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	.150 .086 .027	.144 .082 .026	.131 .075 .024	.120 .069 .022	.109 .063 .020	
2.0	.140 .077 .024	.134 .074 .023	.124 .069 .021	.115 .064 .020	.106 .060 .019	
3.0	.131 .070 .021	.126 .068 .020	.117 .064 .019	.109 .060 .018	.102 .056 .017	
4.0	.123 .064 .019	.119 .062 .018	.111 .059 .018	.105 .056 .017	.098 .053 .016	
5.0	.116 .059 .017	.112 .058 .017	.106 .055 .016	.100 .053 .016	.095 .051 .015	
6.0	.109 .055 .016	.106 .054 .015	.101 .052 .015	.096 .050 .015	.091 .048 .014	
7.0	.104 .051 .015	.101 .050 .014	.097 .049 .014	.092 .047 .014	.088 .046 .013	
8.0	.099 .048 .014	.097 .048 .013	.093 .046 .013	.089 .045 .013	.085 .044 .013	
9.0	.095 .046 .013	.093 .045 .013	.089 .044 .012	.085 .043 .012	.082 .042 .012	
10.0	.091 .043 .012	.089 .043 .012	.086 .042 .012	.082 .041 .012	.079 .040 .011	

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	.190 .190 .190	.163 .163 .163	.111 .111 .111	.064 .064 .064	.020 .020 .020	
1.0	.169 .158 .147	.145 .135 .126	.099 .093 .087	.057 .054 .051	.018 .017 .016	
2.0	.152 .133 .116	.130 .114 .101	.089 .079 .070	.051 .046 .041	.017 .015 .013	
3.0	.138 .113 .094	.118 .098 .081	.081 .068 .057	.047 .040 .034	.015 .013 .011	
4.0	.126 .098 .077	.108 .085 .067	.074 .059 .047	.043 .035 .028	.014 .011 .009	
5.0	.116 .086 .064	.099 .074 .056	.068 .052 .039	.040 .031 .023	.013 .010 .008	
6.0	.107 .076 .054	.092 .066 .047	.063 .046 .033	.037 .027 .020	.012 .009 .007	
7.0	.100 .068 .046	.086 .059 .040	.059 .041 .029	.034 .024 .017	.011 .008 .006	
8.0	.093 .062 .040	.080 .053 .035	.055 .037 .025	.032 .022 .015	.010 .007 .005	
9.0	.088 .056 .035	.075 .049 .030	.052 .034 .021	.030 .020 .013	.010 .007 .004	
10.0	.083 .051 .030	.071 .045 .026	.050 .031 .019	.029 .019 .011	.009 .006 .004	

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	2H	13.4	14.2	13.6	14.3	14.5	13.6	14.3	13.8	14.5	14.6
	3H	14.1	14.8	14.4	15.0	15.2	14.3	15.0	14.6	15.2	15.4
	4H	14.4	15.0	14.7	15.3	15.5	14.6	15.3	14.9	15.5	15.7
	6H	14.6	15.2	14.9	15.4	15.7	14.8	15.4	15.1	15.6	15.9
	8H	14.6	15.2	14.9	15.5	15.7	14.9	15.4	15.1	15.7	15.9
	12H	14.7	15.2	15.0	15.5	15.8	14.9	15.4	15.2	15.7	16.0
4H	2H	13.7	14.4	14.0	14.6	14.8	13.9	14.5	14.2	14.8	15.0
	3H	14.6	15.2	14.9	15.4	15.7	14.8	15.3	15.1	15.6	15.9
	4H	15.0	15.5	15.3	15.8	16.1	15.1	15.7	15.5	15.9	16.3
	6H	15.2	15.7	15.6	16.0	16.4	15.4	15.9	15.8	16.2	16.5
	8H	15.3	15.7	15.7	16.1	16.5	15.5	15.9	15.9	16.3	16.6
	12H	15.4	15.8	15.8	16.1	16.5	15.6	15.9	16.0	16.3	16.7
8H	4H	15.1	15.5	15.4	15.8	16.2	15.2	15.6	15.6	16.0	16.4
	6H	15.4	15.8	15.8	16.2	16.6	15.6	15.9	16.0	16.3	16.7
	8H	15.6	15.9	16.0	16.3	16.7	15.7	16.0	16.2	16.4	16.9
	12H	15.6	15.9	16.1	16.4	16.8	15.8	16.1	16.3	16.5	17.0
12H	4H	15.0	15.4	15.4	15.8	16.2	15.2	15.6	15.6	16.0	16.3
	6H	15.4	15.7	15.9	16.1	16.6	15.6	15.9	16.0	16.3	16.7
	8H	15.6	15.8	16.0	16.3	16.8	15.7	16.0	16.2	16.5	16.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.5 / - 0.7					+ 0.5 / - 0.7				
1.5H		+ 0.7 / - 0.5					+ 0.8 / - 0.4				
2.0H		+ 0.8 / - 0.7					+ 0.9 / - 0.7				

CIE Pub.117, 1166 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.5)  
Area: 0.00264 m2

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:

### UTILIZATION FACTORS TABLE

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

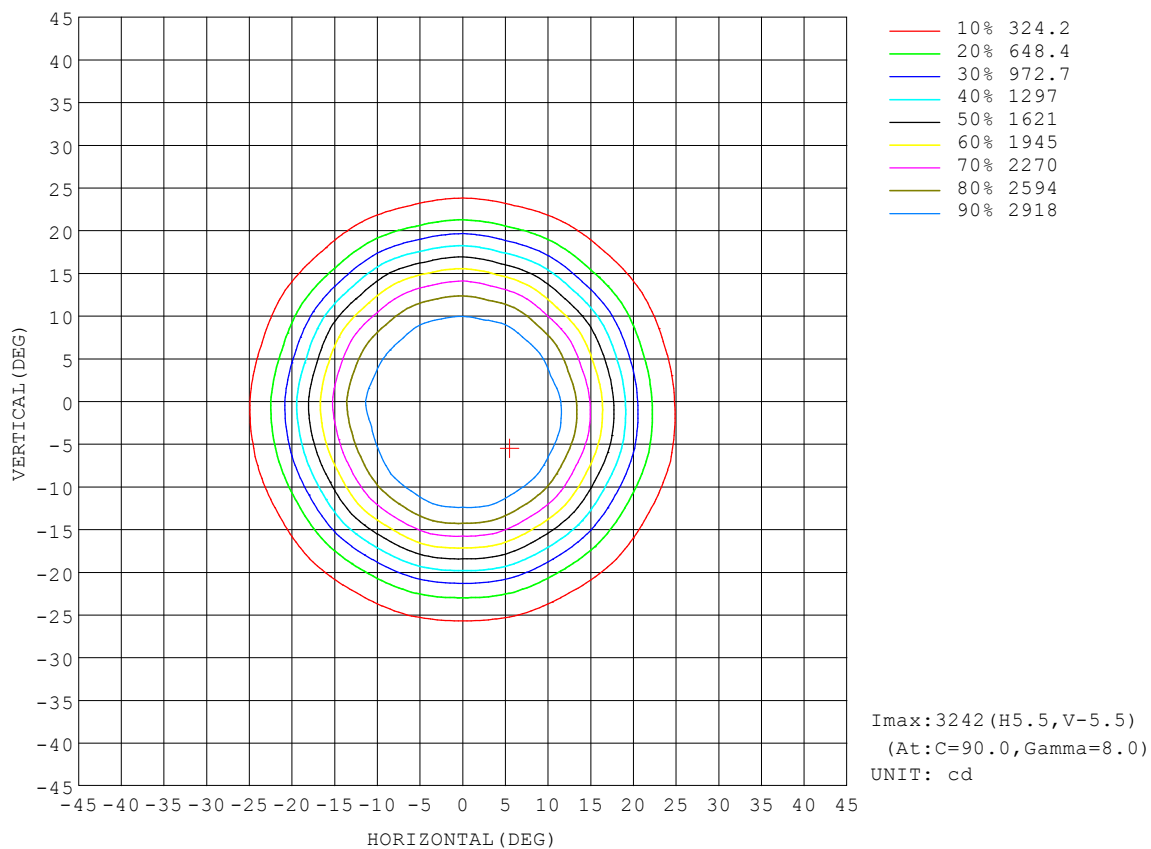
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	87	94	89	86	83
1.00	100	95	91	99	94	91	98	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	99	105	101	98	103	100	97	93
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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 :



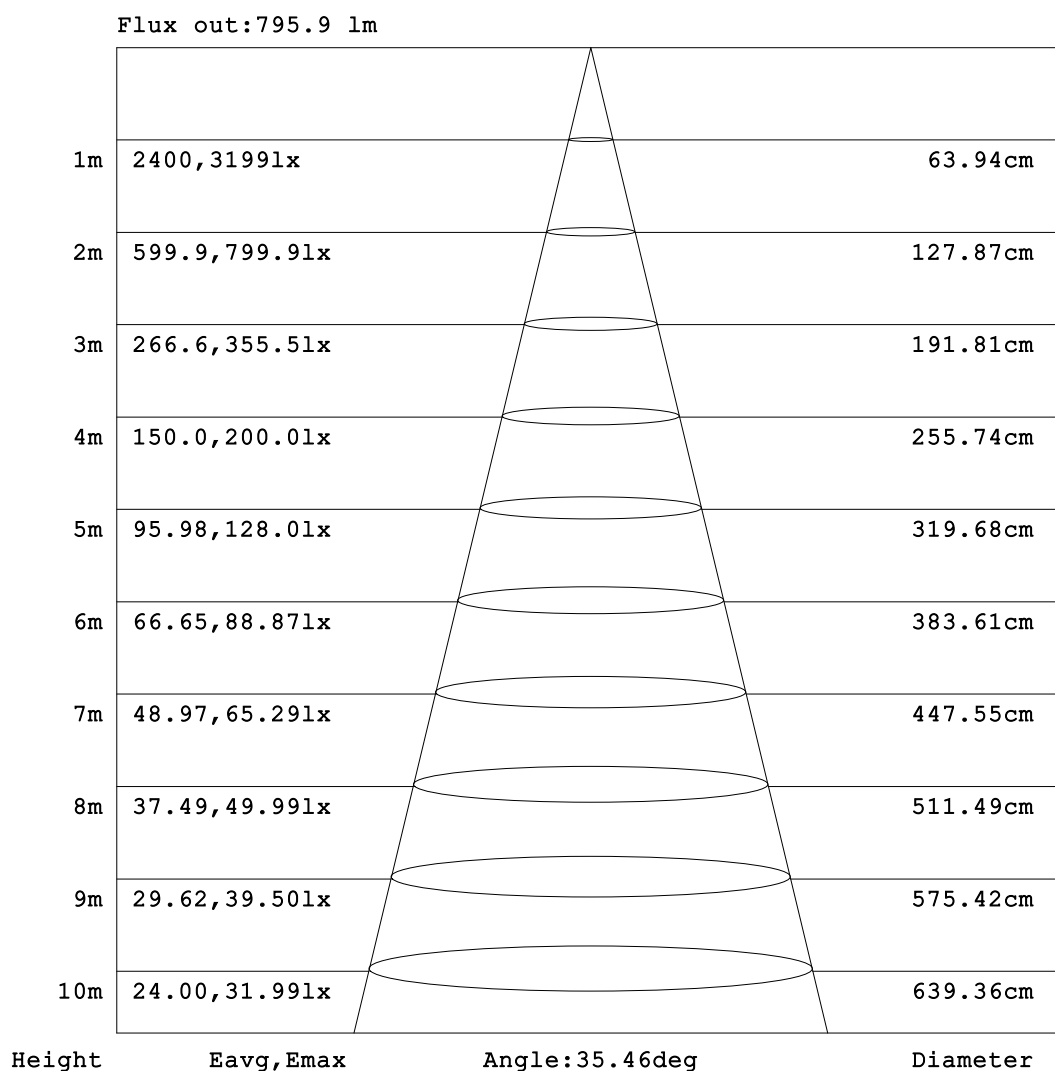
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-10-29

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:



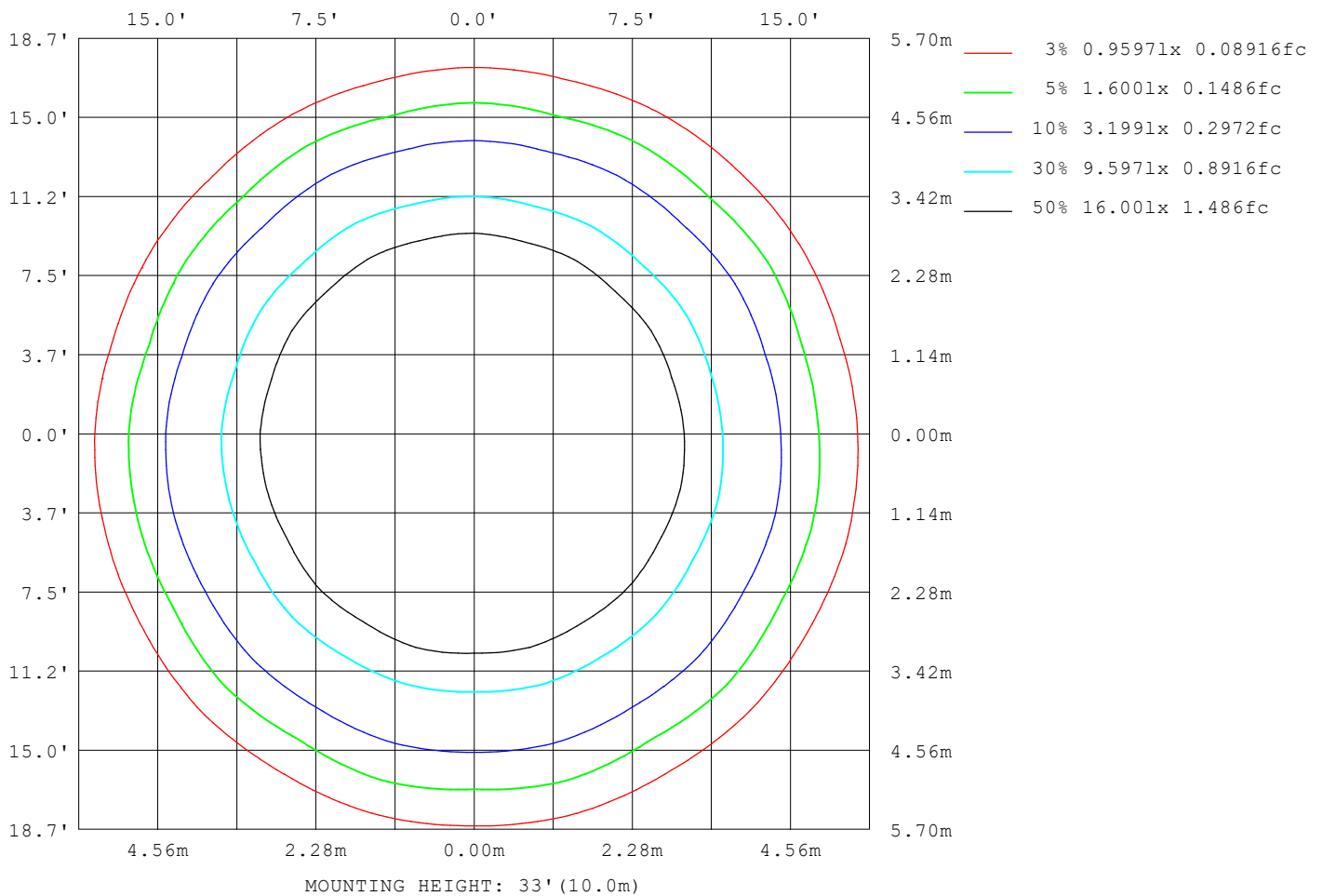
**Note:** The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

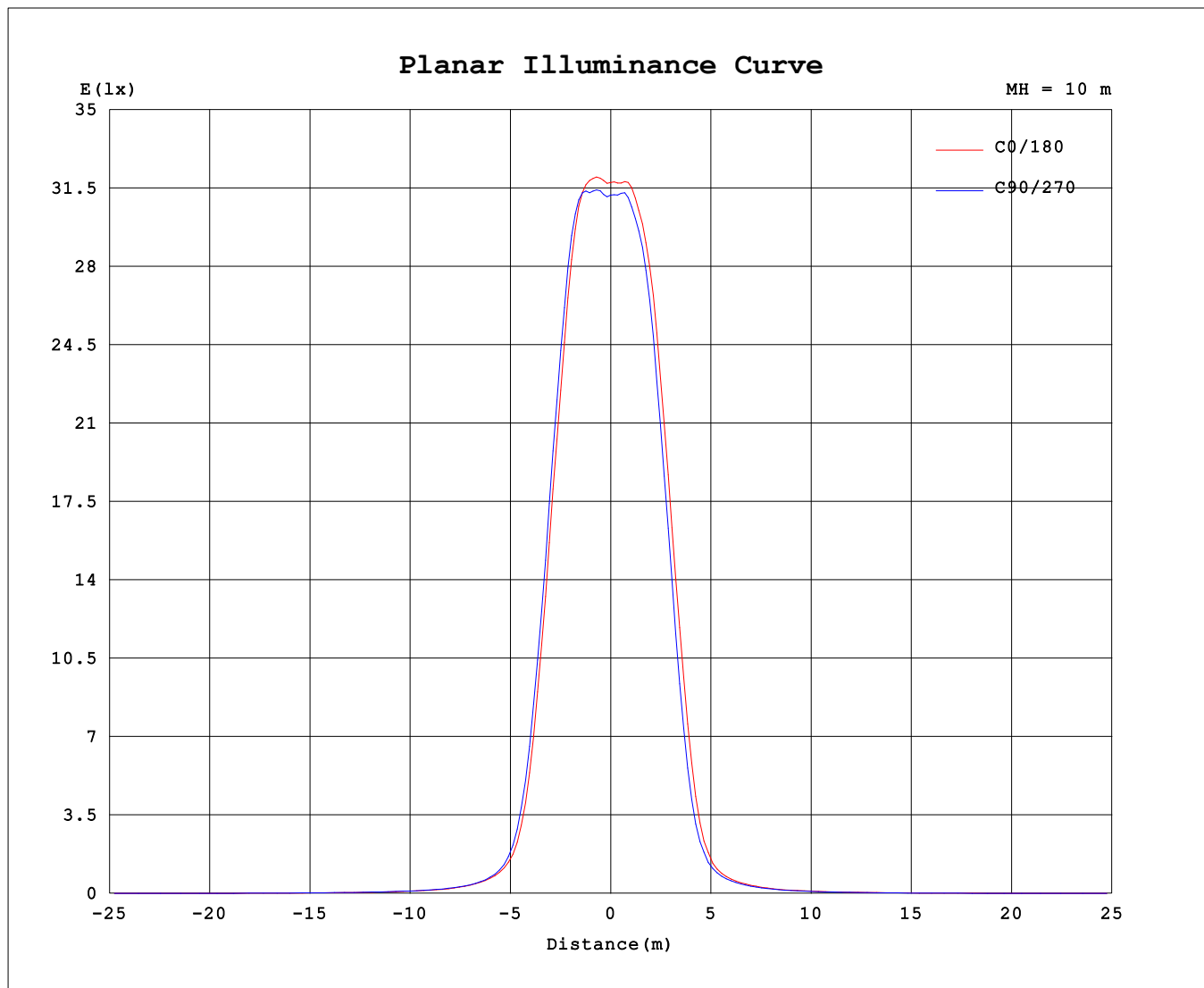
AvgL	cd/m2
L_0~180 (65) av	8598
L_0~180 (75) av	6468
L_0~180 (85) av	4497
L_90~270 (65) av	8577
L_90~270 (75) av	6456
L_90~270 (85) av	4329
L_45 (65) av	8516
L_45 (75) av	6395
L_45 (85) av	4343

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

[illegible]

```

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:

```

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

UNIT: cd

[illegible]

```

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:

```