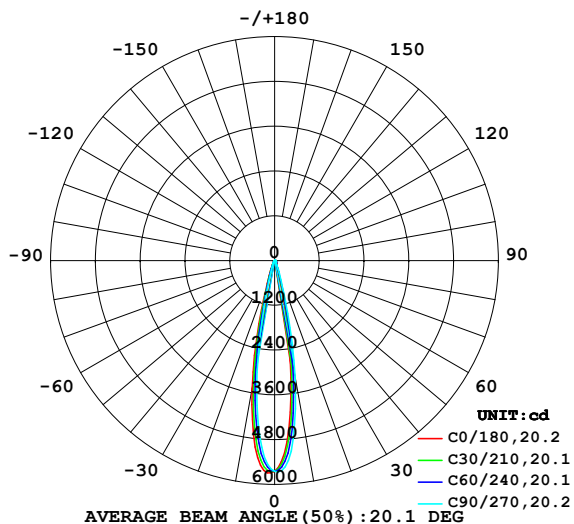


**LUMINAIRE PHOTOMETRIC TEST REPORT**

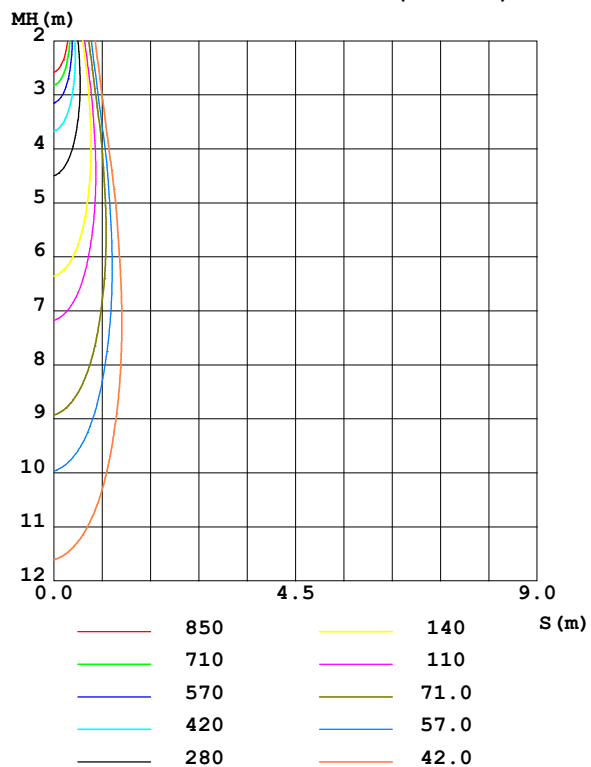
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 58	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 80.76 lm/W
MODEL	TL45-11G27-24-S	Imax (cd)	5713	S/MH(C0/180)	0.37	
NOMINAL POWER(W)	11	LOR(%)	100.0	S/MH(C90/270)	0.31	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	864.16	$\eta$ UP,DN(C0-180)	0.0,52.8	
NOMINAL FLUX(lm)	864.16	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,47.2	
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	230	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.30	

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:

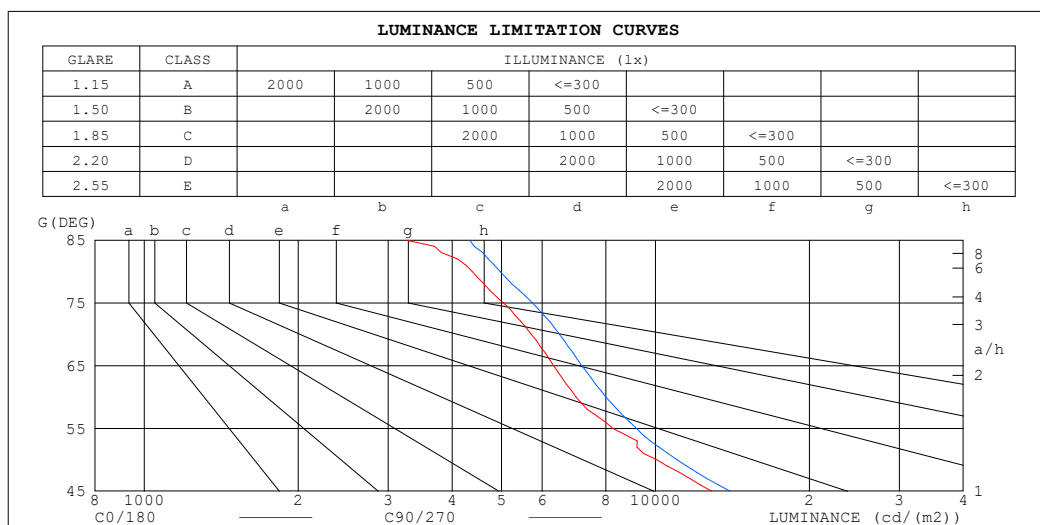
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2261	2699	3160	3557	3484	2995	2554	2177	0- 10	399.7	399.7	46.3,46.3
20	239.7	307.7	382.4	450.4	428.7	330.9	262.2	224.3	10- 20	302.8	702.5	81.3,81.3
30	81.56	93.55	102.6	110.7	108.4	94.50	85.11	79.03	20- 30	78.43	781.0	90.4,90.4
40	34.99	37.64	38.84	41.71	41.35	37.58	36.15	35.32	30- 40	37.63	818.6	94.7,94.7
50	17.03	18.32	18.73	19.72	19.76	18.71	18.18	17.18	40- 50	20.48	839.1	97.1,97.1
60	9.207	10.12	10.56	11.06	11.04	10.67	9.843	9.127	50- 60	12.33	851.4	98.5,98.5
70	5.141	5.713	5.858	6.023	6.073	6.008	5.490	5.138	60- 70	7.702	859.1	99.4,99.4
80	2.004	2.240	2.277	2.373	2.411	2.339	2.039	1.867	70- 80	4.055	863.2	99.9,99.9
90	0.4954	0.4728	0.4265	0.4319	0.1170	0.0977	0.0665	0.0667	80- 90	1.010	864.2	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	3263	4332
80	4385	4966
75	5040	5751
70	5712	6488
65	6317	7181
60	6997	8000
55	8254	9185
50	10070	11036
45	12891	14015

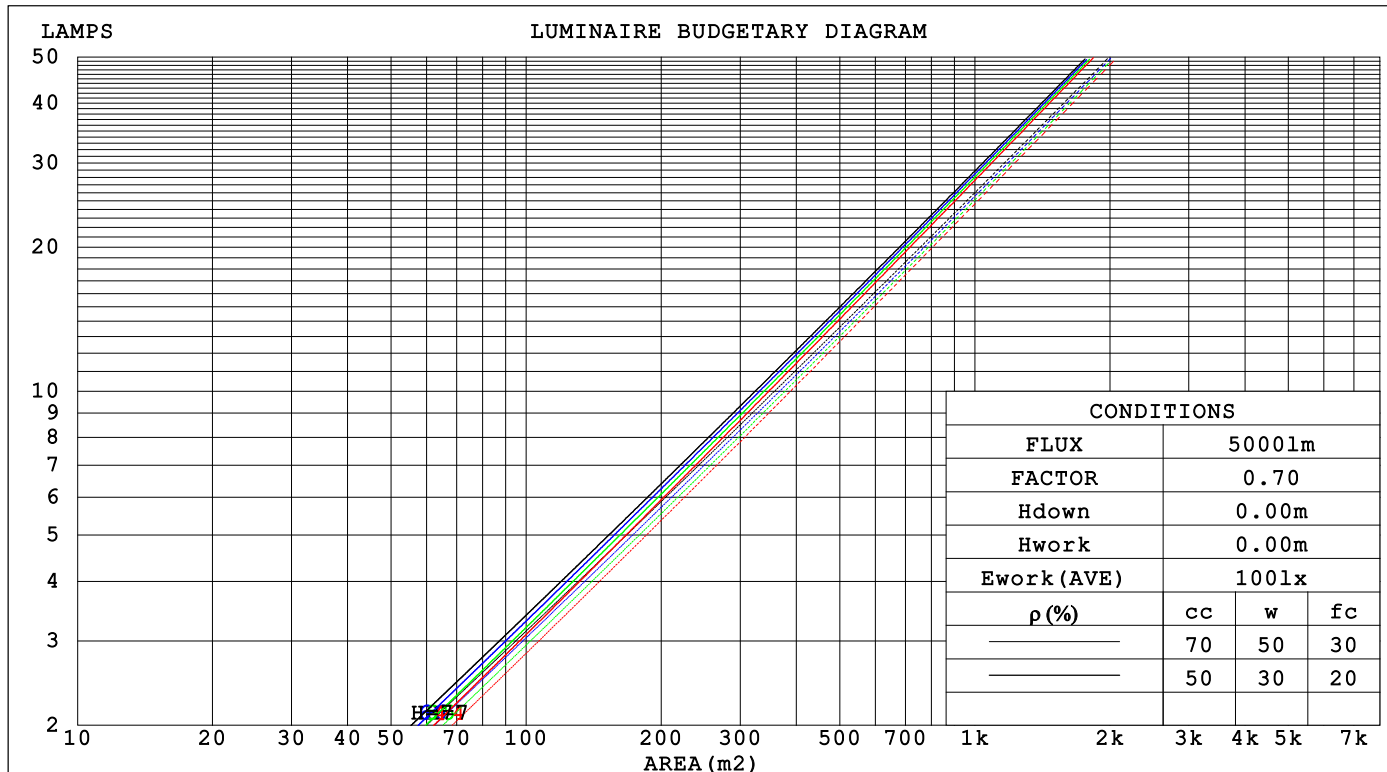
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-10-29

$\gamma$  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:

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                      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	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96
2.0	1.07	1.04	1.02	1.06	1.03	1.01	1.03	1.01	.99	.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.99	.96	1.02	.98	.96	.99	.96	.94	.97	.95	.93	.95	.93	.91	.90
4.0	.99	.95	.92	.98	.94	.92	.96	.93	.91	.94	.92	.90	.93	.90	.89	.87
5.0	.96	.92	.89	.95	.91	.88	.93	.90	.88	.92	.89	.87	.90	.88	.86	.85
6.0	.93	.89	.86	.92	.88	.85	.91	.87	.85	.89	.87	.84	.88	.86	.84	.83
7.0	.90	.86	.83	.89	.86	.83	.88	.85	.83	.87	.84	.82	.86	.84	.82	.81
8.0	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.85	.82	.80	.79
9.0	.85	.82	.79	.85	.81	.79	.84	.81	.79	.84	.81	.78	.83	.80	.78	.77
10.0	.83	.80	.77	.83	.79	.77	.82	.79	.77	.82	.79	.77	.81	.78	.76	.76



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
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Wall Exitance Coefficients(WEC)
0.0						
1.0	.139 .079 .025	.132 .075 .024	.120 .069 .022	.109 .063 .020	.098 .057 .018	
2.0	.128 .070 .022	.123 .068 .021	.113 .063 .019	.103 .058 .018	.095 .053 .017	
3.0	.119 .063 .019	.114 .061 .018	.106 .057 .017	.098 .054 .016	.091 .050 .016	
4.0	.111 .057 .017	.107 .056 .017	.100 .053 .016	.093 .050 .015	.087 .047 .014	
5.0	.103 .053 .015	.100 .051 .015	.094 .049 .014	.088 .047 .014	.083 .044 .013	
6.0	.097 .049 .014	.094 .048 .014	.089 .046 .013	.084 .044 .013	.080 .042 .012	
7.0	.091 .045 .013	.089 .044 .013	.085 .043 .012	.080 .041 .012	.076 .040 .012	
8.0	.087 .042 .012	.085 .042 .012	.081 .040 .011	.077 .039 .011	.073 .038 .011	
9.0	.082 .040 .011	.080 .039 .011	.077 .038 .011	.074 .037 .011	.071 .036 .010	
10.0	.078 .038 .010	.077 .037 .010	.074 .036 .010	.071 .035 .010	.068 .034 .010	

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	.168 .158 .148	.144 .135 .127	.099 .093 .088	.057 .054 .051	.018 .017 .017	
2.0	.150 .133 .118	.129 .114 .102	.088 .079 .071	.051 .046 .042	.016 .015 .014	
3.0	.135 .113 .096	.116 .098 .083	.080 .068 .058	.046 .040 .034	.015 .013 .011	
4.0	.123 .098 .079	.105 .085 .069	.072 .059 .048	.042 .035 .029	.013 .011 .009	
5.0	.112 .086 .066	.096 .074 .057	.066 .052 .041	.038 .030 .024	.012 .010 .008	
6.0	.103 .075 .056	.088 .065 .049	.061 .046 .034	.035 .027 .020	.011 .009 .007	
7.0	.095 .067 .048	.082 .058 .042	.056 .041 .030	.033 .024 .018	.011 .008 .006	
8.0	.088 .060 .041	.076 .052 .036	.052 .037 .026	.031 .022 .015	.010 .007 .005	
9.0	.082 .055 .036	.071 .047 .031	.049 .033 .022	.029 .020 .013	.009 .006 .004	
10.0	.077 .050 .032	.066 .043 .028	.046 .030 .020	.027 .018 .012	.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	13.6	14.2	13.8	14.4	14.5	14.1	14.8	14.3	14.9	15.1
3H	14.3	14.9	14.5	15.1	15.3	14.9	15.5	15.1	15.7	15.9
4H	14.6	15.2	14.9	15.4	15.6	15.2	15.8	15.5	16.0	16.2
6H	14.8	15.3	15.1	15.6	15.8	15.4	16.0	15.7	16.2	16.4
8H	14.8	15.4	15.1	15.6	15.9	15.5	16.0	15.8	16.2	16.5
12H	14.9	15.4	15.2	15.6	15.9	15.5	16.0	15.8	16.3	16.5
4H 2H	13.9	14.5	14.2	14.7	14.9	14.4	15.0	14.6	15.2	15.4
3H	14.8	15.3	15.1	15.6	15.8	15.3	15.8	15.6	16.1	16.3
4H	15.2	15.7	15.5	15.9	16.2	15.7	16.2	16.1	16.5	16.8
6H	15.5	15.9	15.8	16.2	16.5	16.0	16.4	16.4	16.8	17.1
8H	15.5	15.9	15.9	16.3	16.6	16.1	16.5	16.5	16.9	17.2
12H	15.6	15.9	16.0	16.3	16.7	16.2	16.5	16.6	16.9	17.3
8H 4H	15.3	15.7	15.7	16.1	16.4	15.8	16.2	16.2	16.6	16.9
6H	15.7	16.0	16.1	16.4	16.8	16.2	16.5	16.6	16.9	17.3
8H	15.8	16.1	16.3	16.5	17.0	16.4	16.6	16.8	17.1	17.5
12H	15.9	16.1	16.4	16.6	17.1	16.4	16.7	16.9	17.1	17.6
12H 4H	15.3	15.7	15.7	16.0	16.4	15.8	16.1	16.2	16.5	16.9
6H	15.7	16.0	16.1	16.4	16.8	16.2	16.5	16.7	16.9	17.3
8H	15.9	16.1	16.3	16.6	17.0	16.4	16.6	16.8	17.1	17.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.6 / - 0.8					+ 0.6 / - 0.8				
1.5H	+ 0.8 / - 0.7					+ 1.1 / - 0.6				
2.0H	+ 1.1 / - 0.8					+ 1.1 / - 0.6				

CIE Pub.117, 864.2 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:

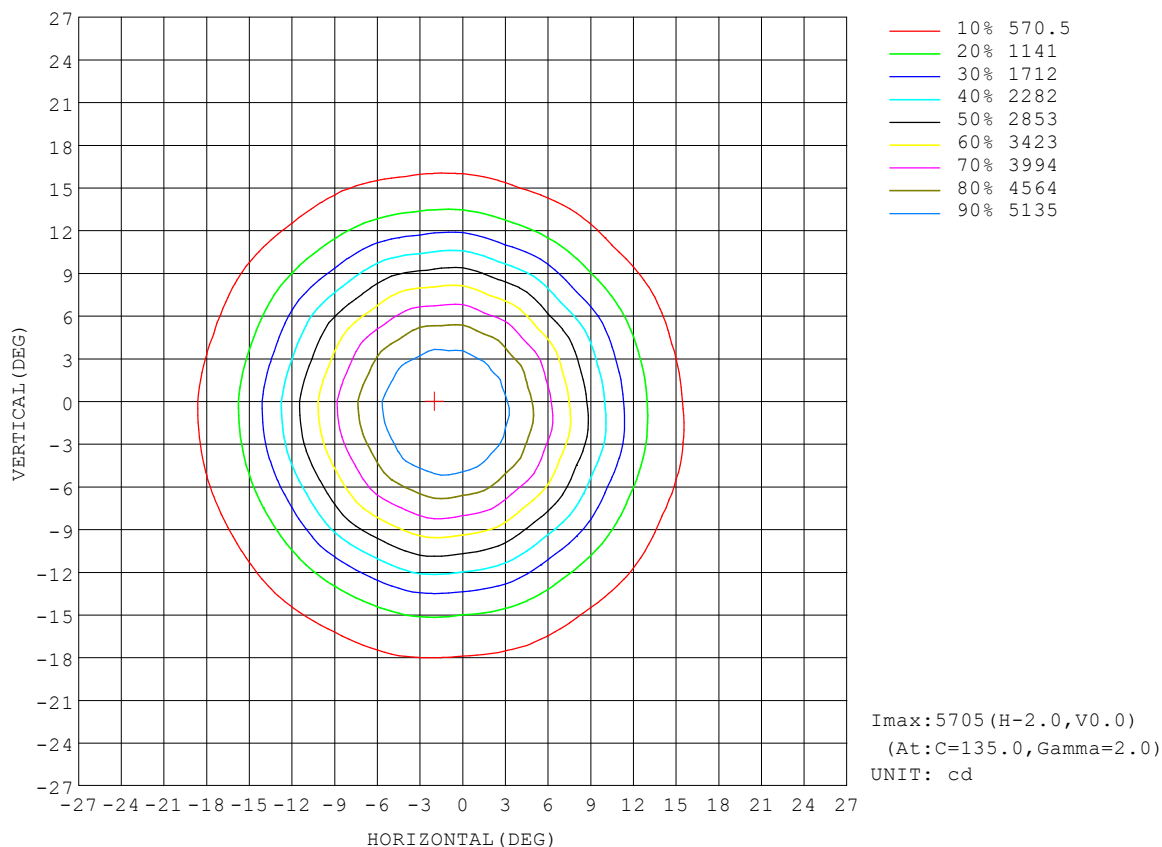
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	88	82	78	87	82	78	75
0.80	96	90	86	95	89	86	94	89	86	82
1.00	100	94	91	99	94	90	97	94	90	86
1.25	104	98	95	103	98	95	101	97	94	90
1.50	106	102	98	105	101	98	103	99	97	92
2.00	109	105	101	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	109	108	106	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 :



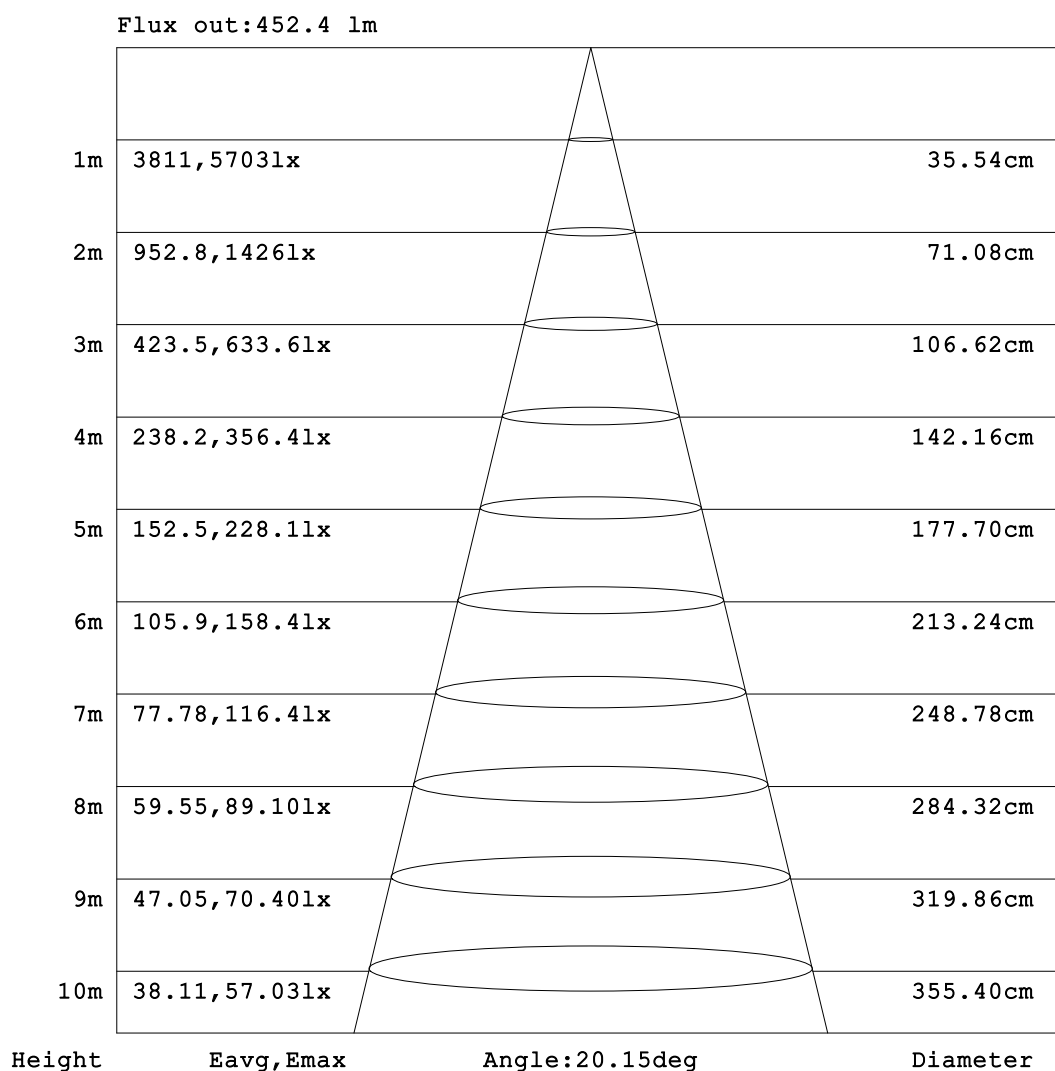
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-10-29

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:



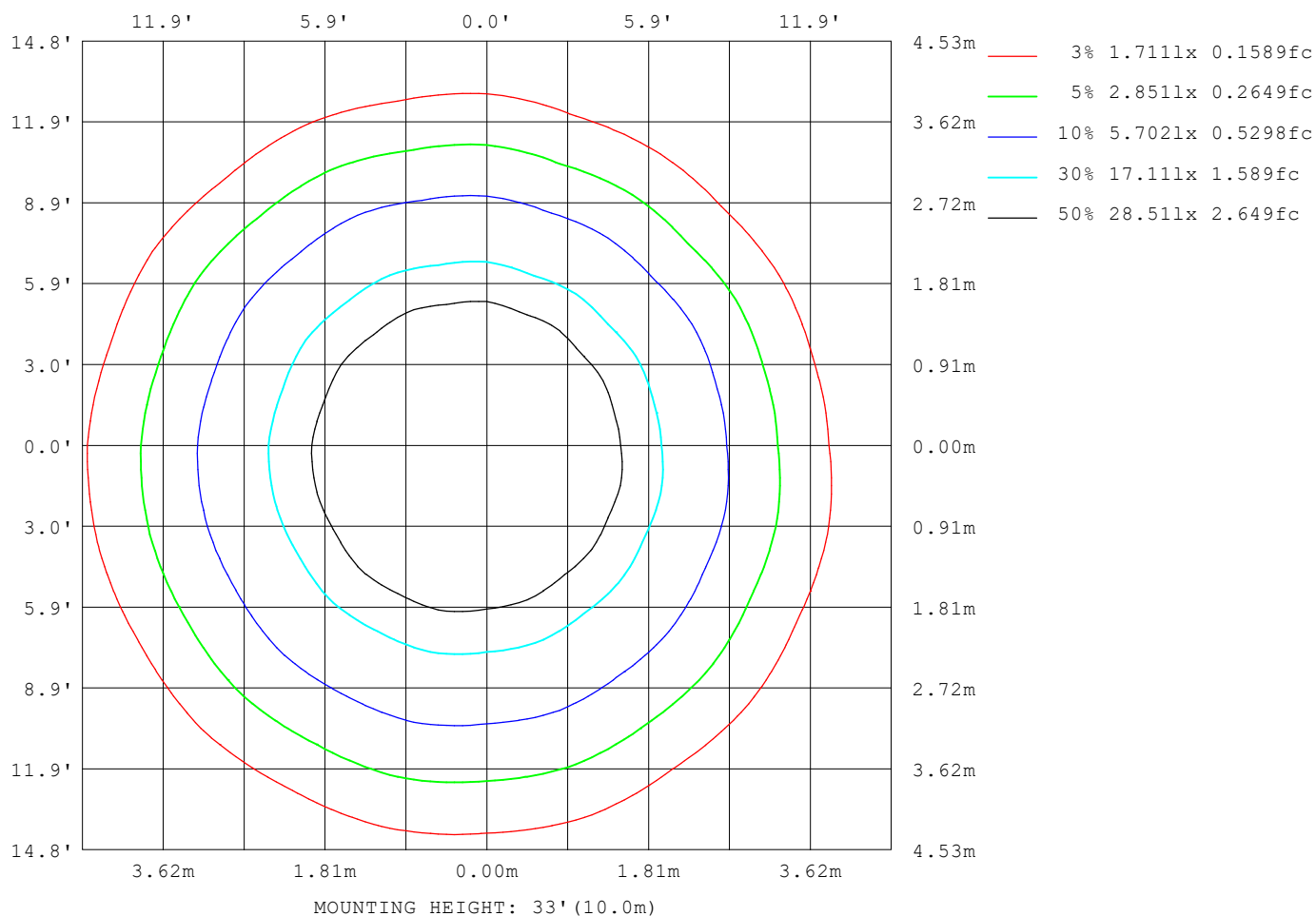
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

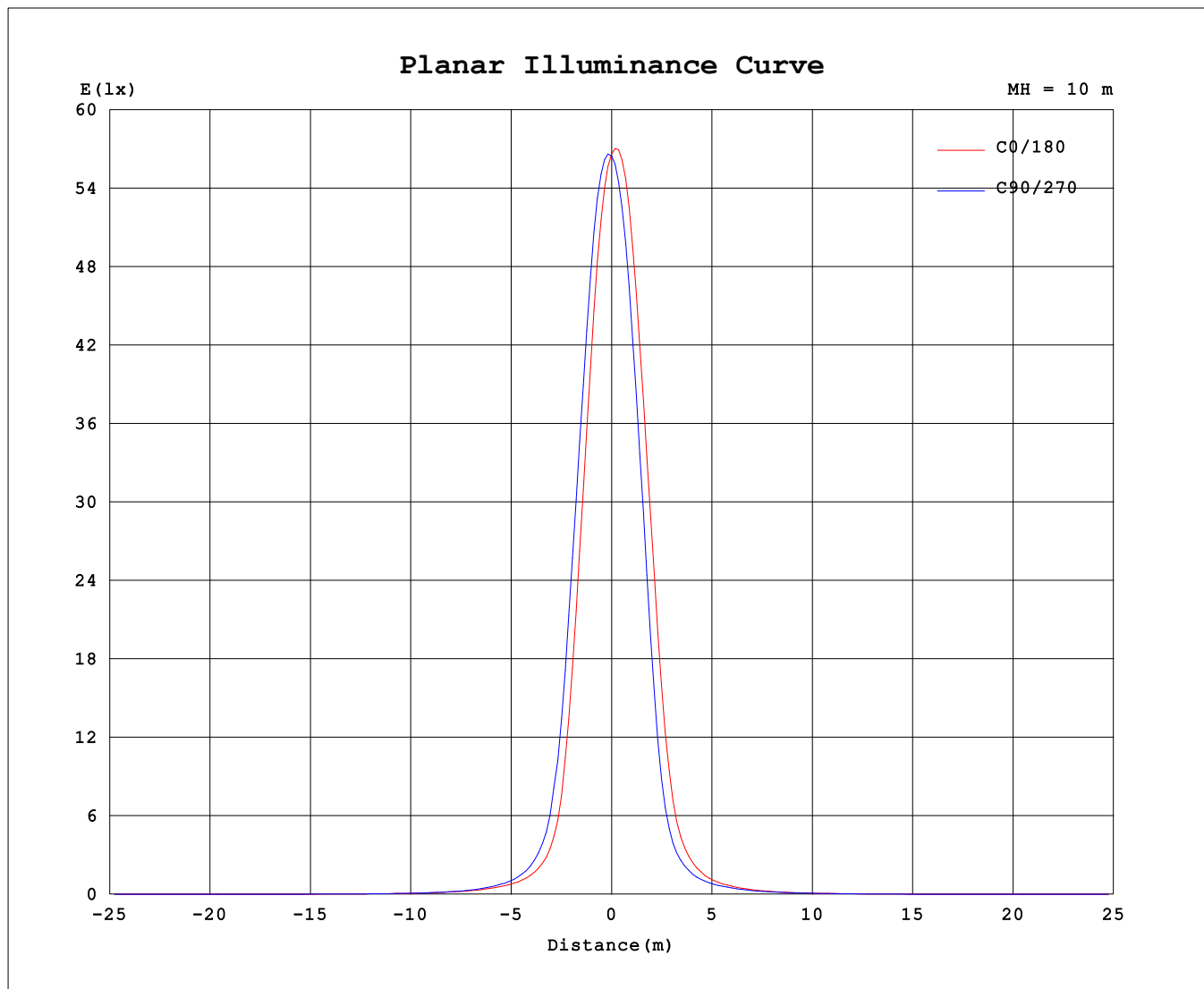
AvgL	cd/m2
L_0~180 (65) av	6863
L_0~180 (75) av	5530
L_0~180 (85) av	3601
L_90~270 (65) av	6947
L_90~270 (75) av	5556
L_90~270 (85) av	3356
L_45 (65) av	6976
L_45 (75) av	5639
L_45 (85) av	3391

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:

```