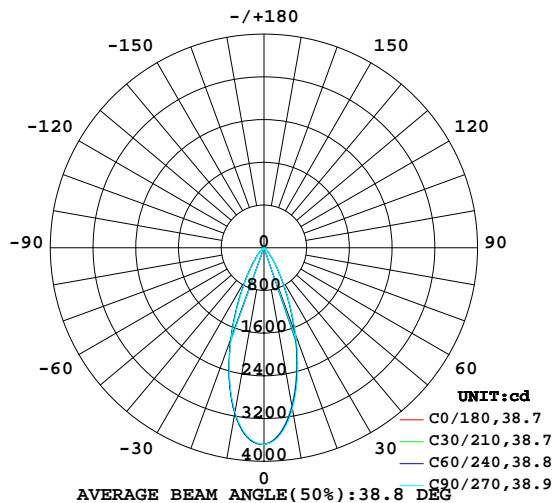


## LUMINAIRE PHOTOMETRIC TEST REPORT

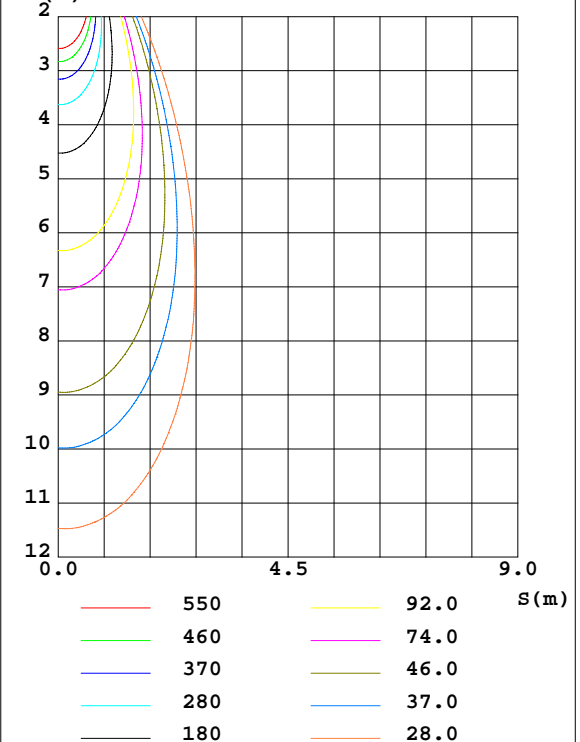
Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 68.73 lm/W
MODEL	ALT70-27G30-40	I <sub>max</sub> (cd)	3687	S/MH(C0/180)	0.61	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.63	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1897.1	η UP,DN(C0-180)	0.0,50.8	
NOMINAL FLUX(lm)	1897.06	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.2	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225.2	η down(%)	100.0	CIBSE SHR MAX	0.65	

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:2020-06-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

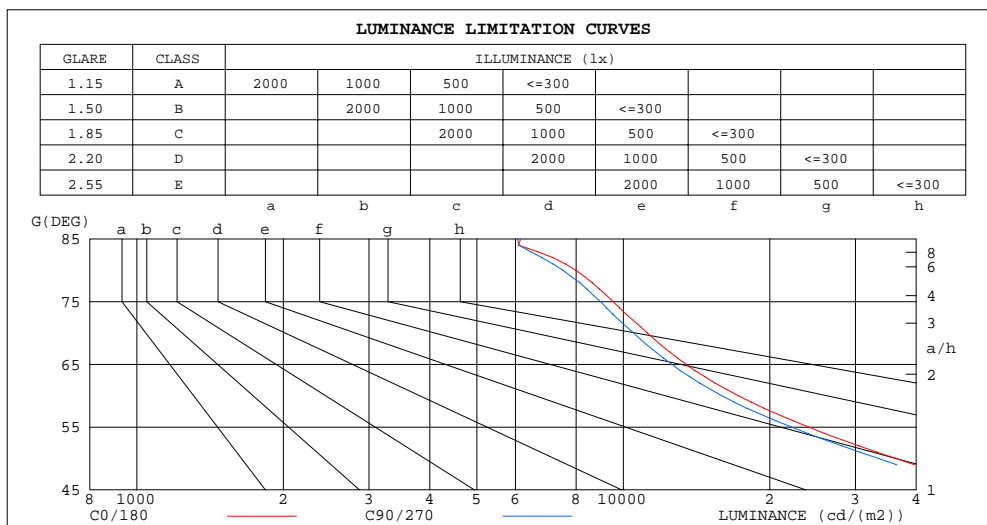
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	3138	3170	3124	3069	3009	2992	3067	3102	0- 10	322.4	322.4	17,17
20	1808	1849	1791	1746	1700	1661	1736	1766	10- 20	671.9	994.3	52.4,52.4
30	698.5	697.9	658.3	651.5	633.0	609.2	647.8	671.9	20- 30	518.1	1512	79.7,79.7
40	215.1	210.6	199.8	199.0	192.1	181.7	192.6	202.3	30- 40	238.1	1751	92.3,92.3
50	65.84	64.48	60.76	61.63	60.48	57.79	58.92	61.52	40- 50	87.94	1838	96.9,96.9
60	24.29	23.71	22.51	23.07	23.30	22.21	22.25	23.04	50- 60	34.19	1873	98.7,98.7
70	10.82	10.59	10.15	10.37	10.27	9.786	9.755	10.21	60- 70	15.56	1888	99.5,99.5
80	3.913	3.912	3.685	3.471	3.071	2.947	3.066	3.316	70- 80	6.944	1895	99.9,99.9
90	1.623	1.620	1.640	1.687	1.177	1.166	1.162	1.131	80- 90	1.915	1897	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:2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6068	6147
80	7979	7507
75	9524	8977
70	11200	10499
65	13456	12587
60	17201	15925
55	24027	22169
50	36272	33444
45	58937	53768

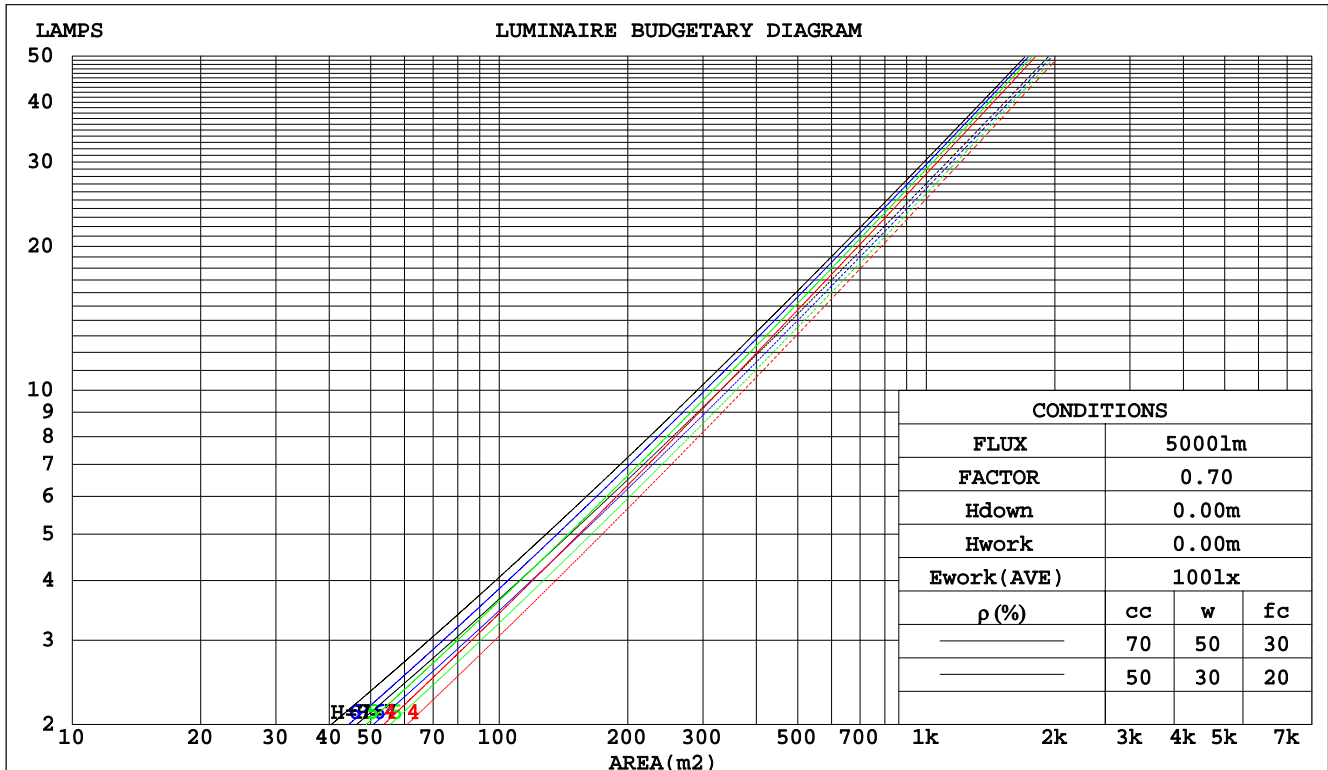
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.92	.90	.88
3.0	.98	.93	.89	.96	.92	.89	.94	.90	.87	.91	.88	.86	.89	.87	.85	.83
4.0	.92	.87	.83	.91	.86	.83	.89	.85	.82	.87	.83	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6.0	.82	.77	.73	.82	.77	.73	.80	.76	.72	.79	.75	.72	.78	.74	.71	.70
7.0	.78	.73	.69	.78	.72	.69	.76	.72	.68	.75	.71	.68	.74	.71	.68	.66
8.0	.75	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.64	.63
9.0	.71	.66	.62	.71	.66	.62	.70	.65	.62	.69	.65	.62	.68	.64	.61	.60
10.0	.68	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.59	.65	.61	.59	.57



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AE  
 Test Date:2020-06-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		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	.170	.096	.031	.163	.093	.029	.150	.086	.028	.139	.080	.026	.128	.074	.024	
2.0	.161	.088	.027	.155	.085	.026	.145	.080	.025	.135	.076	.024	.126	.071	.022	
3.0	.152	.081	.024	.147	.079	.024	.138	.075	.023	.130	.071	.022	.122	.068	.021	
4.0	.144	.075	.022	.140	.073	.022	.132	.070	.021	.125	.067	.020	.119	.064	.020	
5.0	.137	.070	.020	.133	.068	.020	.126	.066	.019	.120	.063	.019	.114	.061	.018	
6.0	.130	.065	.019	.127	.064	.018	.121	.062	.018	.116	.060	.018	.111	.058	.017	
7.0	.124	.061	.017	.121	.060	.017	.116	.059	.017	.111	.057	.017	.107	.055	.016	
8.0	.118	.058	.016	.116	.057	.016	.111	.056	.016	.107	.054	.016	.103	.053	.015	
9.0	.113	.055	.015	.111	.054	.015	.107	.053	.015	.103	.052	.015	.099	.051	.015	
10.0	.108	.052	.014	.106	.051	.014	.103	.050	.014	.099	.049	.014	.096	.048	.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	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.083	.068	.055	.048	.040	.033	.015	.013	.011	
4.0	.131	.099	.074	.112	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.105	.075	.053	.072	.053	.038	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.045	.068	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.033	.060	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.096	.058	.032	.083	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.053	.028	.079	.046	.025	.055	.033	.018	.032	.019	.011	.010	.006	.003	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-06-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:60			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	18.9	19.8	19.1	19.9	20.1	18.5	19.4	18.7	19.5	19.7
	3H	18.9	19.7	19.2	19.9	20.1	18.5	19.3	18.8	19.5	19.7
	4H	18.9	19.7	19.2	19.9	20.1	18.5	19.3	18.8	19.5	19.7
	6H	18.9	19.6	19.2	19.8	20.1	18.5	19.2	18.8	19.4	19.7
	8H	18.8	19.5	19.1	19.8	20.0	18.4	19.1	18.7	19.4	19.6
	12H	18.8	19.5	19.1	19.7	20.0	18.4	19.1	18.7	19.3	19.6
4H	2H	18.8	19.5	19.0	19.7	20.0	18.4	19.1	18.6	19.4	19.6
	3H	18.8	19.5	19.1	19.7	20.0	18.4	19.1	18.8	19.4	19.6
	4H	18.8	19.4	19.2	19.7	20.0	18.5	19.1	18.8	19.4	19.7
	6H	18.8	19.4	19.2	19.7	20.1	18.5	19.0	18.8	19.3	19.7
	8H	18.8	19.3	19.2	19.7	20.0	18.5	18.9	18.8	19.3	19.7
	12H	18.8	19.3	19.2	19.6	20.0	18.4	18.9	18.8	19.2	19.6
8H	4H	18.8	19.3	19.2	19.6	20.0	18.4	18.9	18.8	19.2	19.6
	6H	18.8	19.2	19.2	19.6	20.0	18.4	18.8	18.8	19.2	19.6
	8H	18.8	19.1	19.2	19.6	20.0	18.4	18.8	18.9	19.2	19.6
	12H	18.8	19.1	19.2	19.5	20.0	18.4	18.7	18.9	19.1	19.6
12H	4H	18.7	19.2	19.1	19.5	19.9	18.3	18.8	18.8	19.2	19.6
	6H	18.8	19.1	19.2	19.5	20.0	18.4	18.7	18.8	19.2	19.6
	8H	18.8	19.1	19.2	19.5	20.0	18.4	18.7	18.9	19.1	19.6
Variations with the observer position at spacings:											
S = 1.0H	+ 2.2 / - 3.7					+ 2.1 / - 3.7					
1.5H	+ 3.6 / - 3.1					+ 3.5 / - 3.0					
2.0H	+ 3.5 / - 2.4					+ 3.3 / - 2.3					

CIE Pub.117, 1897 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.2$ )

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

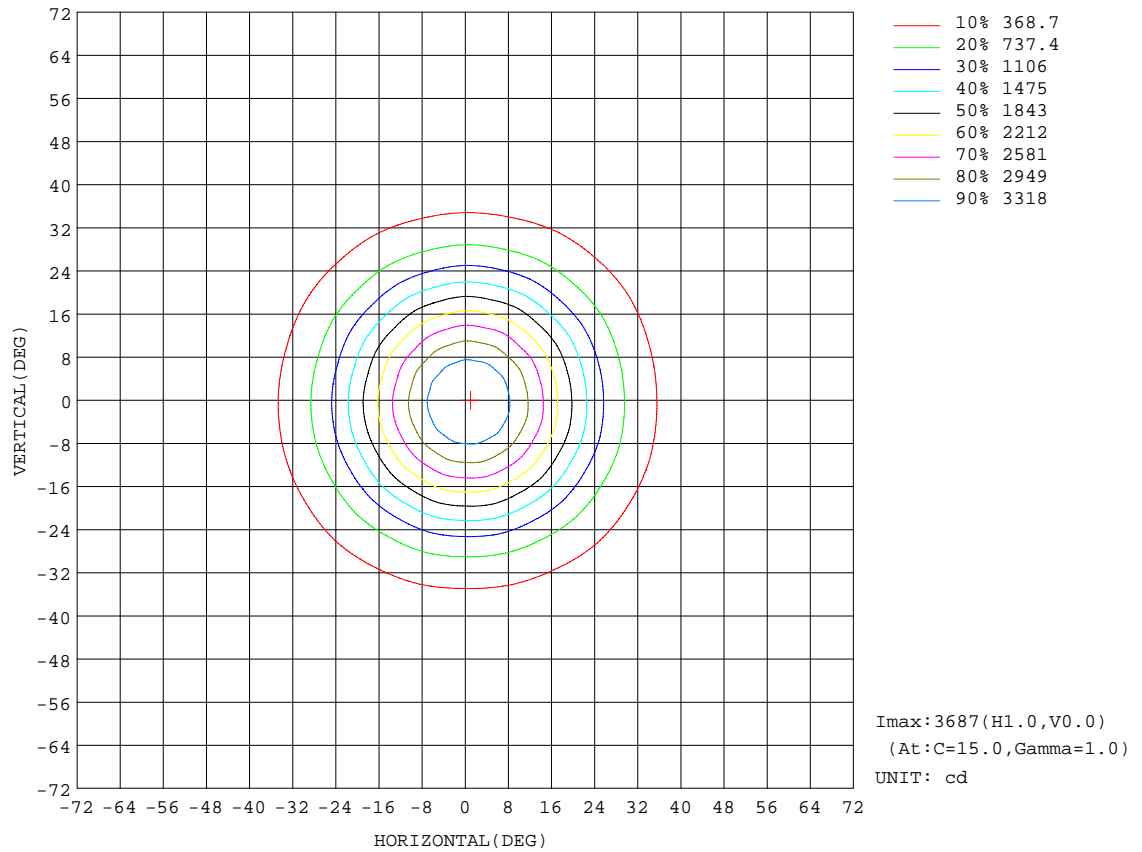
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	76	86	80	76	85	80	76	73
0.80	94	88	84	94	88	84	92	87	84	80
1.00	99	93	89	98	93	89	96	92	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	97	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	99	93
2.50	110	106	103	108	105	102	105	103	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	105	97
5.00	115	113	111	113	111	109	109	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: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



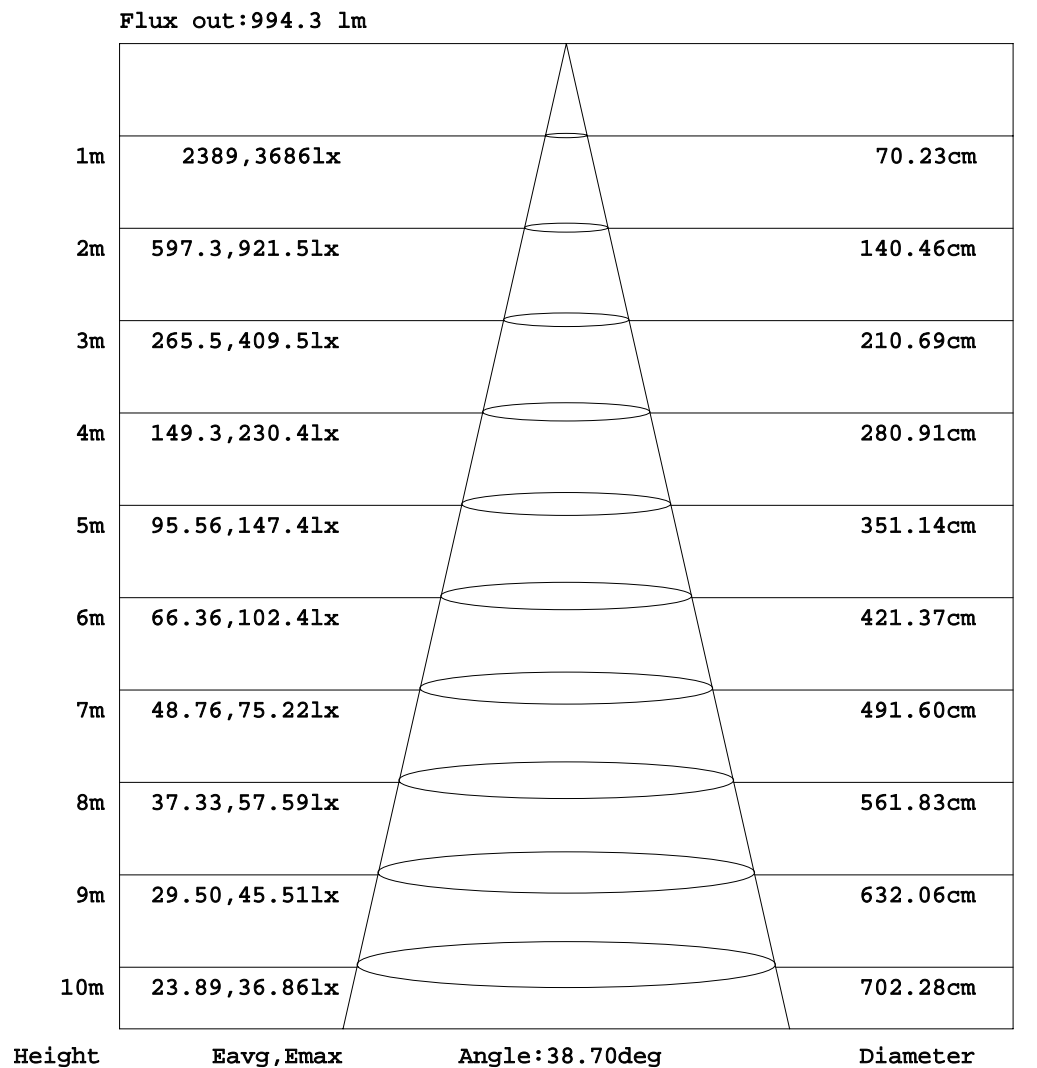
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



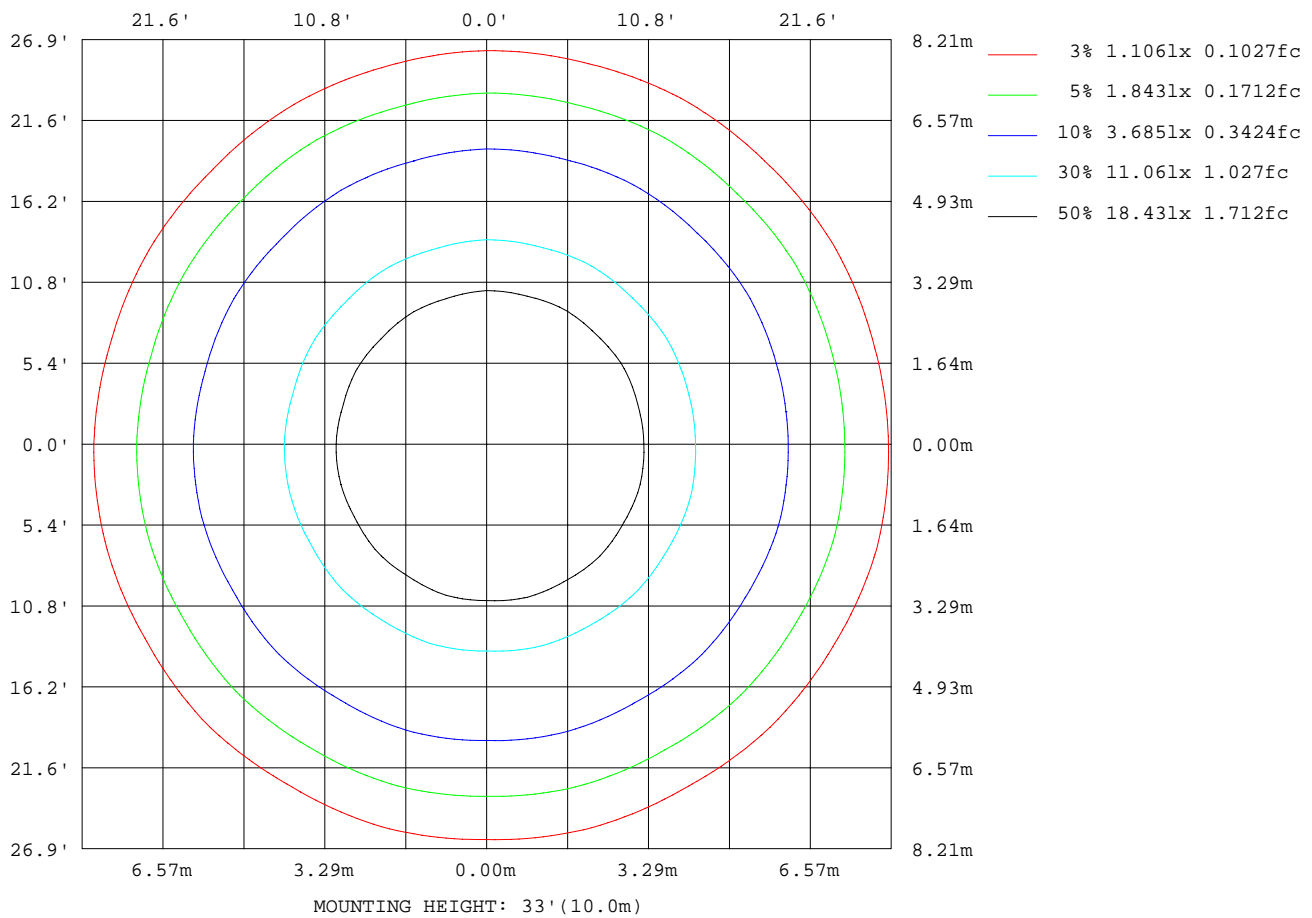
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AE  
 Test Date:2020-06-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1897.06x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

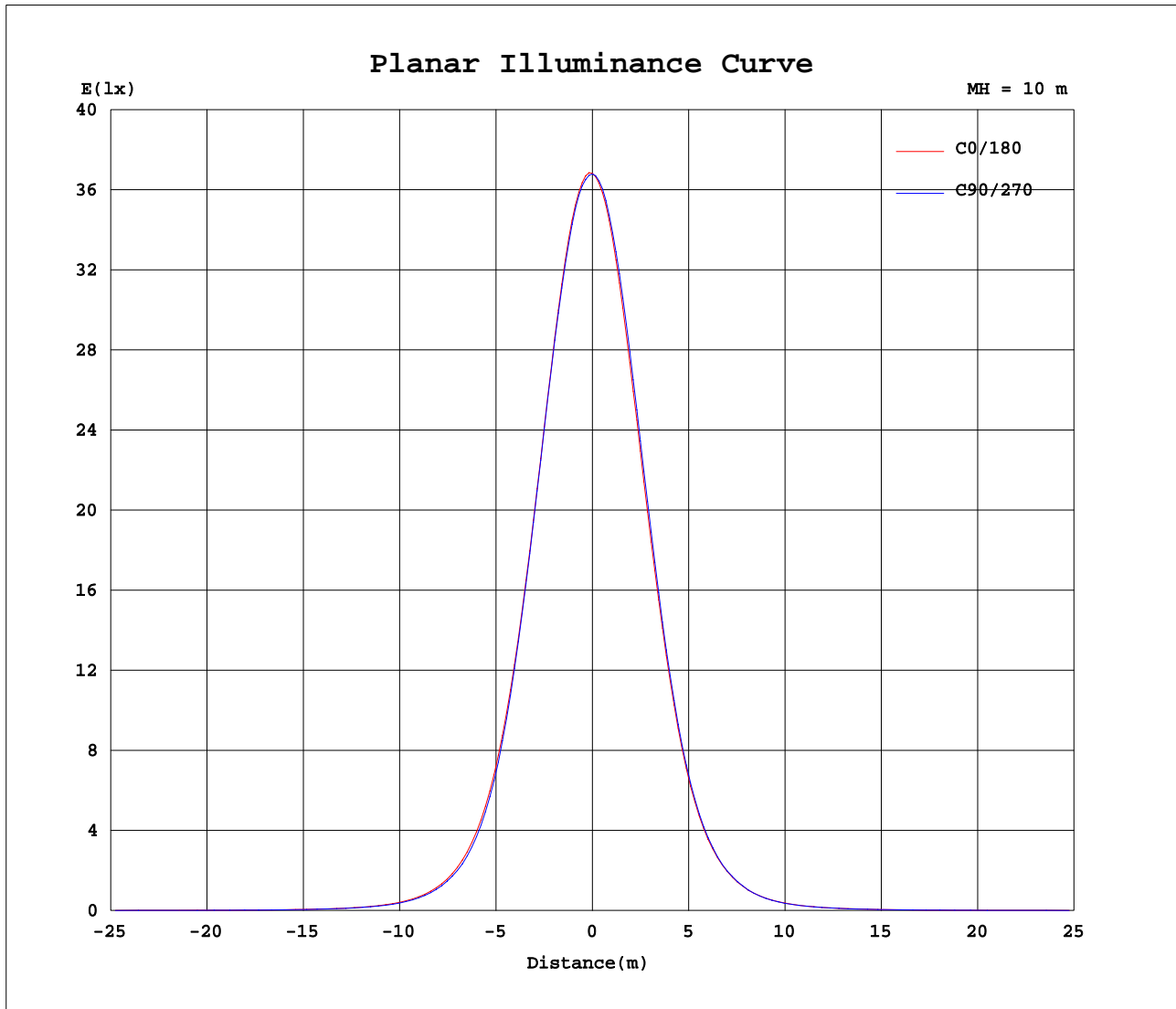
AvgL	cd/m2
L_0~180(65)av	13257
L_0~180(75)av	9041
L_0~180(85)av	5207
L_90~270(65)av	12471
L_90~270(75)av	8661
L_90~270(85)av	5219
L_45(65)av	12815
L_45(75)av	8846
L_45(85)av	5144

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AE  
 Test Date:2020-06-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 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: 2020-06-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

```

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γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
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Remarks:

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