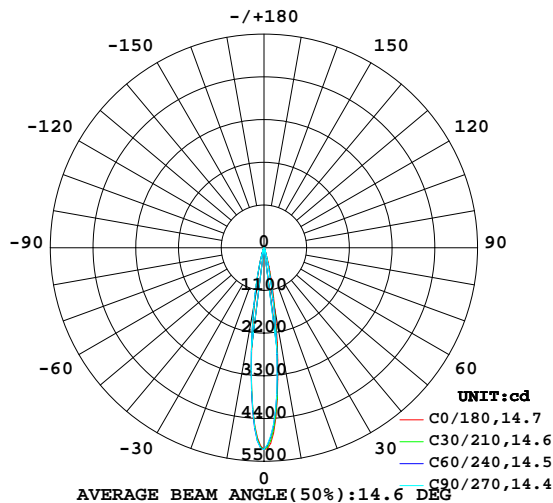


## LUMINAIRE PHOTOMETRIC TEST REPORT

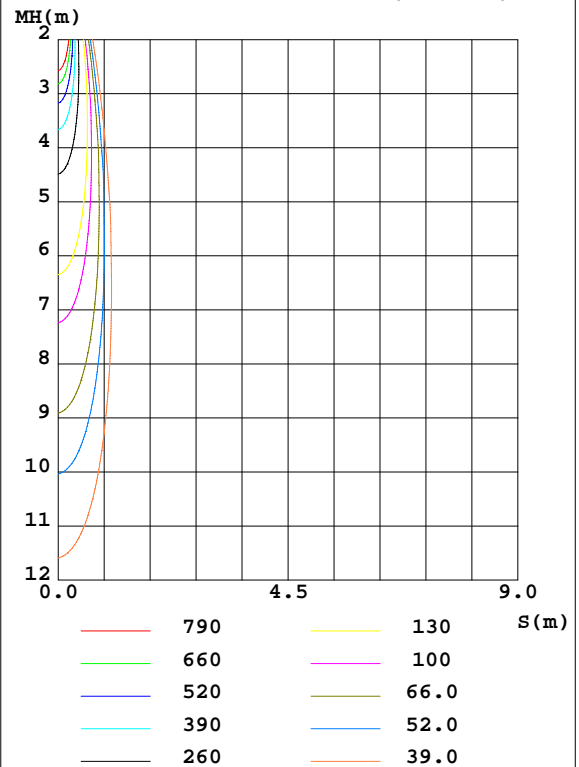
Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:36		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 56.94 lm/W
MODEL	ALR45-8G30-15	I <sub>max</sub> (cd)	5194	S/MH(C0/180)	0.27	
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	0.25	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	453.25	η UP,DN(C0-180)	0.0,51.2	
NOMINAL FLUX(lm)	453.247	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.8	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	225.1	η down(%)	100.0	CIBSE SHR MAX	1.00	

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 V2.0.362  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

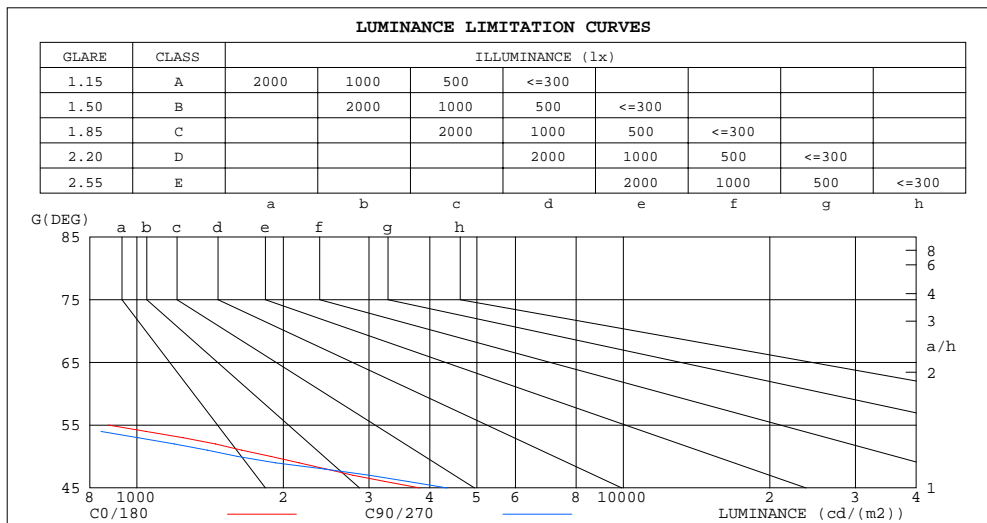
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
10	1394	1528	1505	1591	1625	1352	1331	1335	0- 10	279.1	279.1	61.6,61.6
20	133.1	123.8	122.0	132.7	137.3	116.9	117.5	123.6	10- 20	135.0	414.1	91.4,91.4
30	23.19	24.61	24.13	26.00	25.91	26.32	25.02	24.19	20- 30	25.33	439.4	96.9,96.9
40	7.785	8.021	8.912	9.376	8.594	7.935	8.901	8.706	30- 40	9.073	448.5	98.9,98.9
50	1.994	1.583	1.718	1.787	2.129	2.316	3.808	2.485	40- 50	3.854	452.3	99.8,99.8
60	0.1987	0.0463	0.1652	0.3538	0.3015	0.3628	0.3314	0.3042	50- 60	0.8789	453.2	100,100
70	0	0	0	0	0	0	0	0	60- 70	0.0445	453.2	100,100
80	0	0	0	0	0	0	0	0	70- 80	0	453.2	100,100
90	0	0	0	0	0	0	0	0	80- 90	0	453.2	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:2020-06-16

$\gamma$  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

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	Shielding Angle:



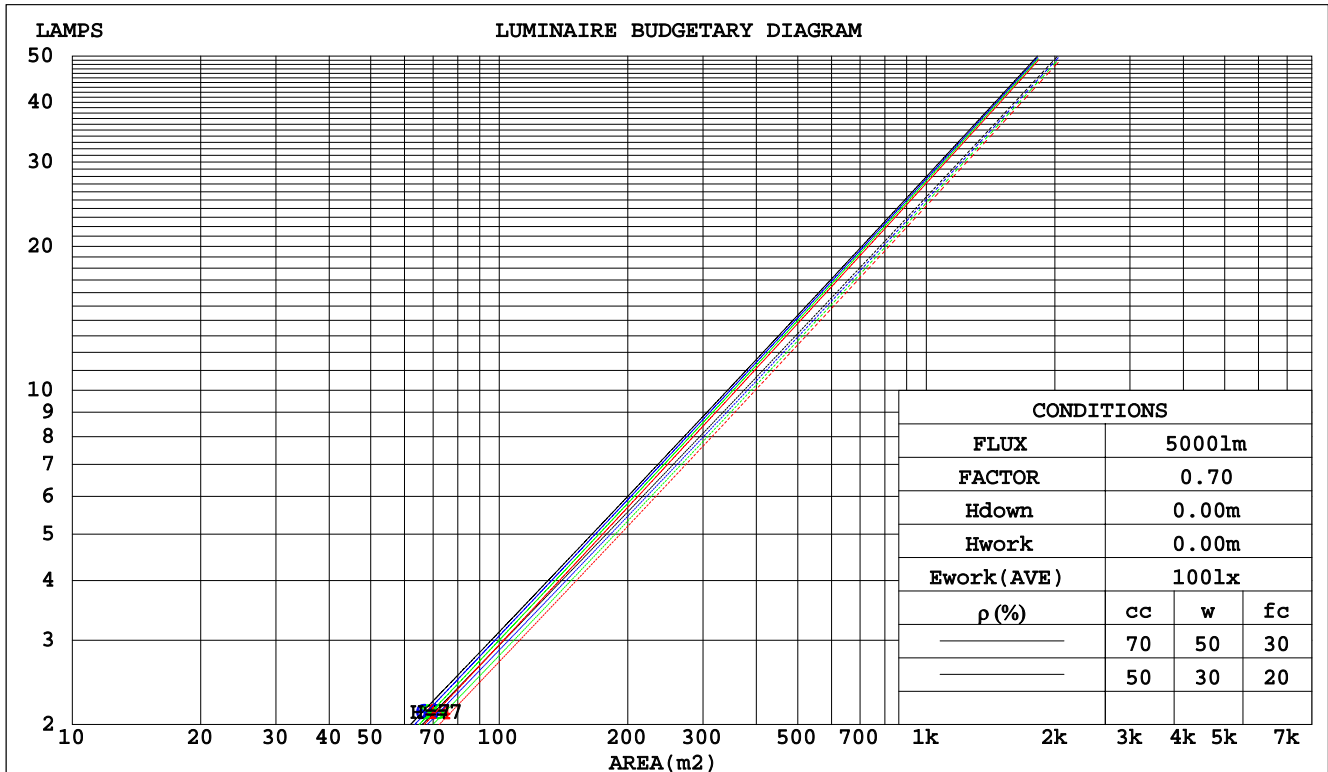
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-06-16

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

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	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	1.14	1.12	1.11	1.12	1.10	1.09	1.08	1.07	1.06	1.04	1.03	1.03	1.01	1.00	.00	.98
2.0	1.10	1.07	1.05	1.08	1.06	1.04	1.05	1.03	1.02	1.02	1.01	.00	.00	.99	.98	.96
3.0	1.06	1.03	1.01	1.05	1.02	1.00	1.03	1.00	.99	1.00	.99	.97	.98	.97	.96	.94
4.0	1.03	1.00	.98	1.02	.99	.97	1.00	.98	.96	.99	.97	.95	.97	.95	.94	.93
5.0	1.01	.97	.95	.00	.97	.95	.98	.96	.94	.97	.95	.93	.96	.94	.92	.91
6.0	.98	.95	.93	.98	.95	.92	.96	.94	.92	.95	.93	.91	.94	.92	.91	.90
7.0	.96	.93	.91	.96	.93	.91	.95	.92	.90	.94	.91	.90	.93	.91	.89	.89
8.0	.95	.91	.89	.94	.91	.89	.93	.91	.89	.92	.90	.88	.92	.90	.88	.87
9.0	.93	.90	.88	.92	.90	.87	.92	.89	.87	.91	.89	.87	.91	.88	.87	.86
10.0	.91	.88	.86	.91	.88	.86	.90	.88	.86	.90	.87	.86	.89	.87	.86	.85



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 V2.0.362  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm									
NAME:				TYPE:			WEIGHT:		
SPEC.:				DIM.:			SERIAL No.:		
MFR.:				SUR.:36			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	.117	.067	.021	.111	.063	.020	.098	.056	.018	.087	.050	.016	.077	.044	.014	
2.0	.107	.058	.018	.101	.056	.017	.091	.051	.016	.082	.046	.014	.073	.042	.013	
3.0	.098	.052	.016	.093	.050	.015	.085	.046	.014	.078	.042	.013	.070	.039	.012	
4.0	.090	.047	.014	.087	.045	.013	.080	.042	.013	.074	.039	.012	.068	.037	.011	
5.0	.084	.043	.012	.081	.042	.012	.075	.039	.012	.070	.037	.011	.065	.035	.010	
6.0	.079	.039	.011	.076	.038	.011	.071	.036	.011	.067	.035	.010	.062	.033	.010	
7.0	.074	.037	.010	.072	.036	.010	.068	.034	.010	.064	.033	.009	.060	.031	.009	
8.0	.070	.034	.010	.068	.033	.009	.064	.032	.009	.061	.031	.009	.058	.030	.009	
9.0	.066	.032	.009	.065	.031	.009	.061	.030	.009	.058	.029	.008	.056	.028	.008	
10.0	.063	.030	.008	.061	.030	.008	.059	.029	.008	.056	.028	.008	.054	.027	.008	

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	.167	.158	.150	.143	.135	.129	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.148	.133	.120	.126	.114	.104	.087	.079	.073	.050	.046	.043	.016	.015	.014	
3.0	.131	.113	.099	.113	.098	.086	.077	.068	.060	.045	.040	.035	.014	.013	.012	
4.0	.118	.097	.082	.101	.084	.071	.069	.059	.050	.040	.034	.030	.013	.011	.010	
5.0	.106	.085	.069	.091	.073	.060	.063	.051	.042	.036	.030	.025	.012	.010	.008	
6.0	.097	.074	.059	.083	.064	.051	.057	.045	.036	.033	.027	.021	.011	.009	.007	
7.0	.088	.066	.050	.076	.057	.044	.052	.040	.031	.030	.024	.018	.010	.008	.006	
8.0	.081	.059	.043	.070	.051	.038	.048	.036	.027	.028	.021	.016	.009	.007	.005	
9.0	.075	.053	.038	.065	.046	.033	.045	.032	.023	.026	.019	.014	.008	.006	.005	
10.0	.070	.048	.033	.060	.042	.029	.042	.029	.021	.024	.017	.012	.008	.006	.004	

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 V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.:			DIM.:			SERIAL No.:				
MFR.:			SUR.:36			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		6.9	7.4	7.1	7.5	7.7	7.1	7.6	7.3	7.7
3H		6.8	7.2	7.0	7.4	7.6	6.9	7.4	7.2	7.6
4H		6.7	7.1	6.9	7.3	7.5	6.9	7.3	7.1	7.5
6H		6.6	7.0	6.9	7.3	7.5	6.8	7.2	7.0	7.4
8H		6.6	7.0	6.8	7.2	7.5	6.7	7.2	7.0	7.4
12H		6.5	6.9	6.8	7.2	7.4	6.7	7.1	7.0	7.3
4H 2H		6.7	7.1	6.9	7.3	7.6	6.9	7.3	7.1	7.5
3H		6.5	6.9	6.8	7.2	7.4	6.7	7.1	7.0	7.4
4H		6.4	6.8	6.7	7.1	7.4	6.6	7.0	6.9	7.3
6H		6.3	6.7	6.7	7.0	7.3	6.5	6.8	6.9	7.2
8H		6.3	6.6	6.6	6.9	7.3	6.4	6.8	6.8	7.1
12H		6.2	6.5	6.6	6.9	7.2	6.4	6.7	6.8	7.0
8H 4H		6.3	6.6	6.6	6.9	7.3	6.4	6.8	6.8	7.1
6H		6.1	6.4	6.6	6.8	7.2	6.3	6.6	6.7	7.0
8H		6.1	6.3	6.5	6.7	7.2	6.2	6.5	6.7	6.9
12H		6.0	6.2	6.5	6.6	7.1	6.2	6.4	6.6	6.8
12H 4H		6.2	6.5	6.6	6.9	7.2	6.4	6.7	6.8	7.0
6H		6.1	6.3	6.5	6.7	7.2	6.2	6.5	6.7	6.9
8H		6.0	6.2	6.5	6.6	7.1	6.2	6.4	6.6	6.8
Variations with the observer position at spacings:										
S = 1.0H		+ 2.6 / -12.1				+ 2.9 / -15.1				
1.5H		+ 4.1 / - 8.3				+ 4.6 / -10.4				
2.0H		+ 6.7 / - 1.5				+ 7.8 / - 1.5				

CIE Pub.117, 453.2 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = -2.7$ )

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 V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	Shielding Angle:

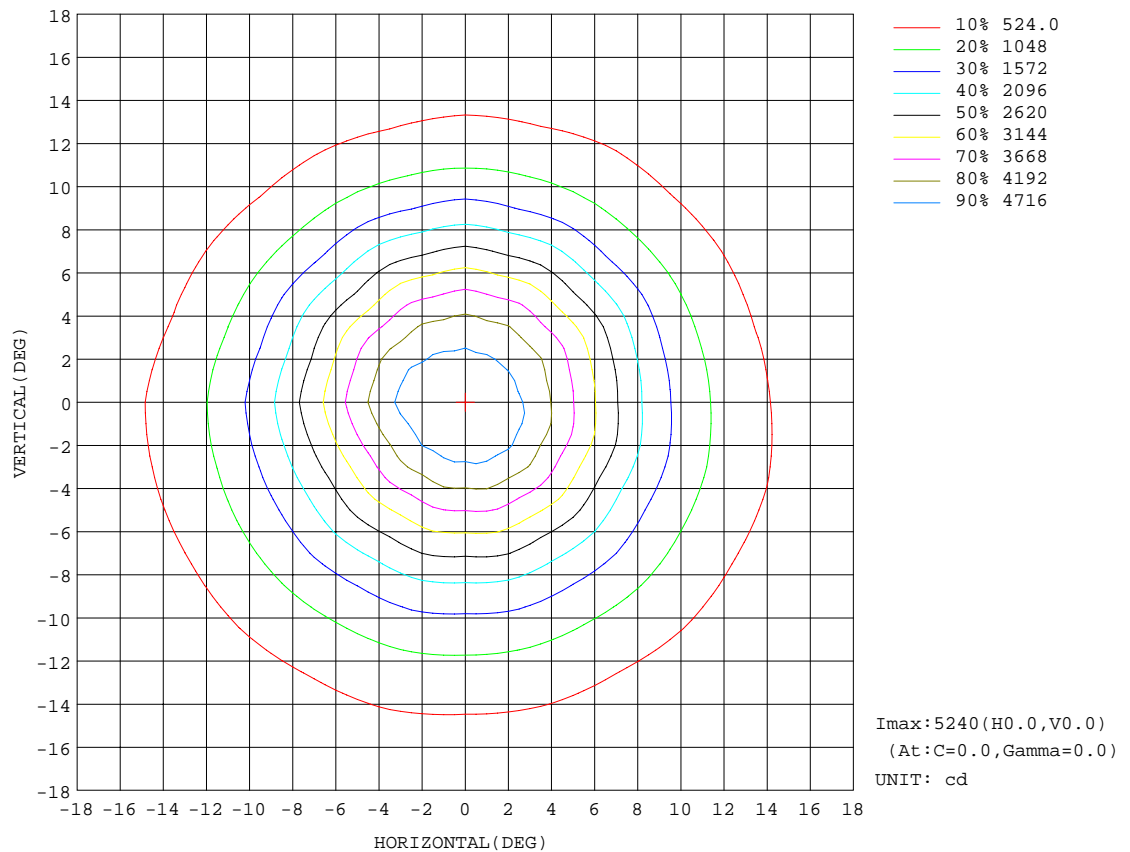
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	101	98	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	113	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
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 V2.0.362  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	Shielding Angle:



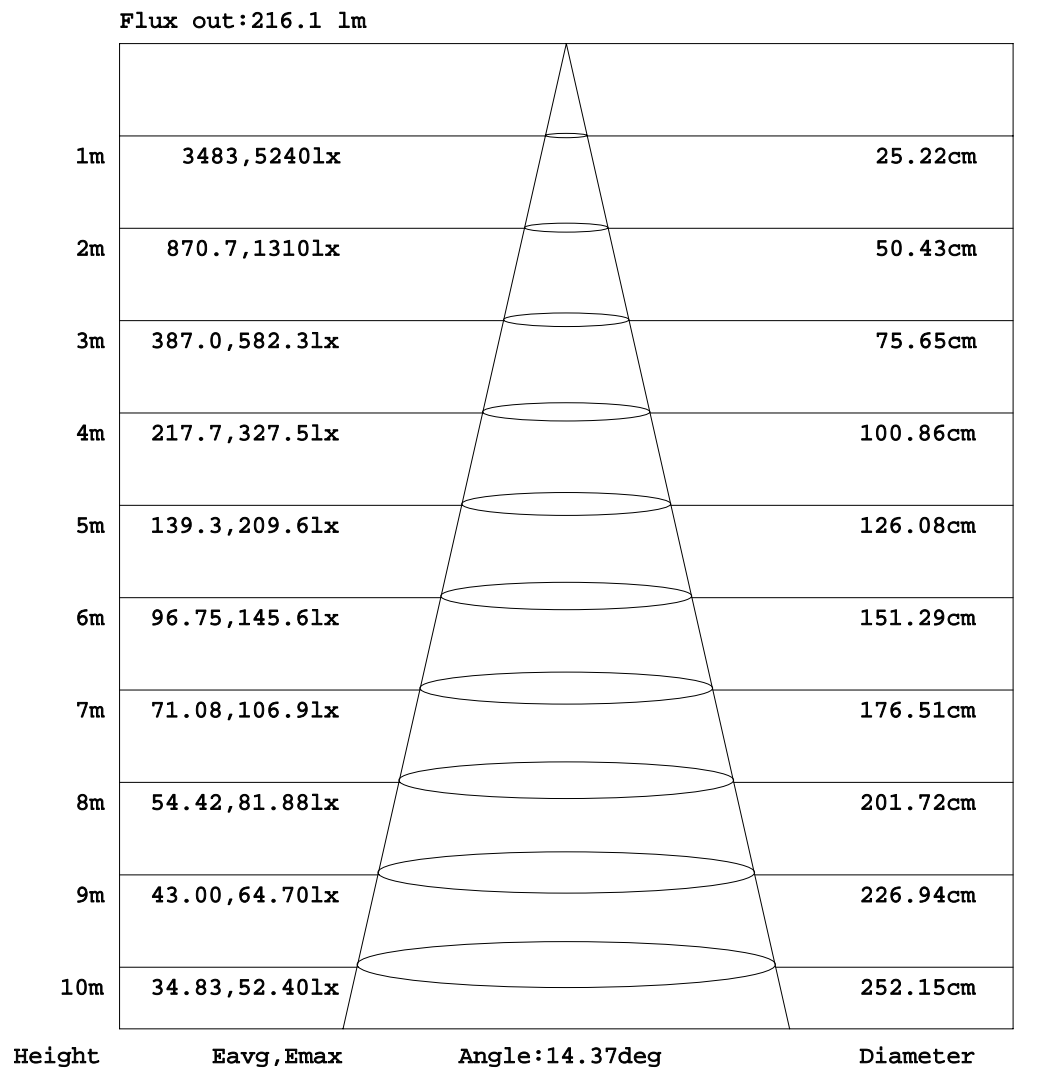
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-06-16

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



### AAI Figure

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	Shielding Angle:



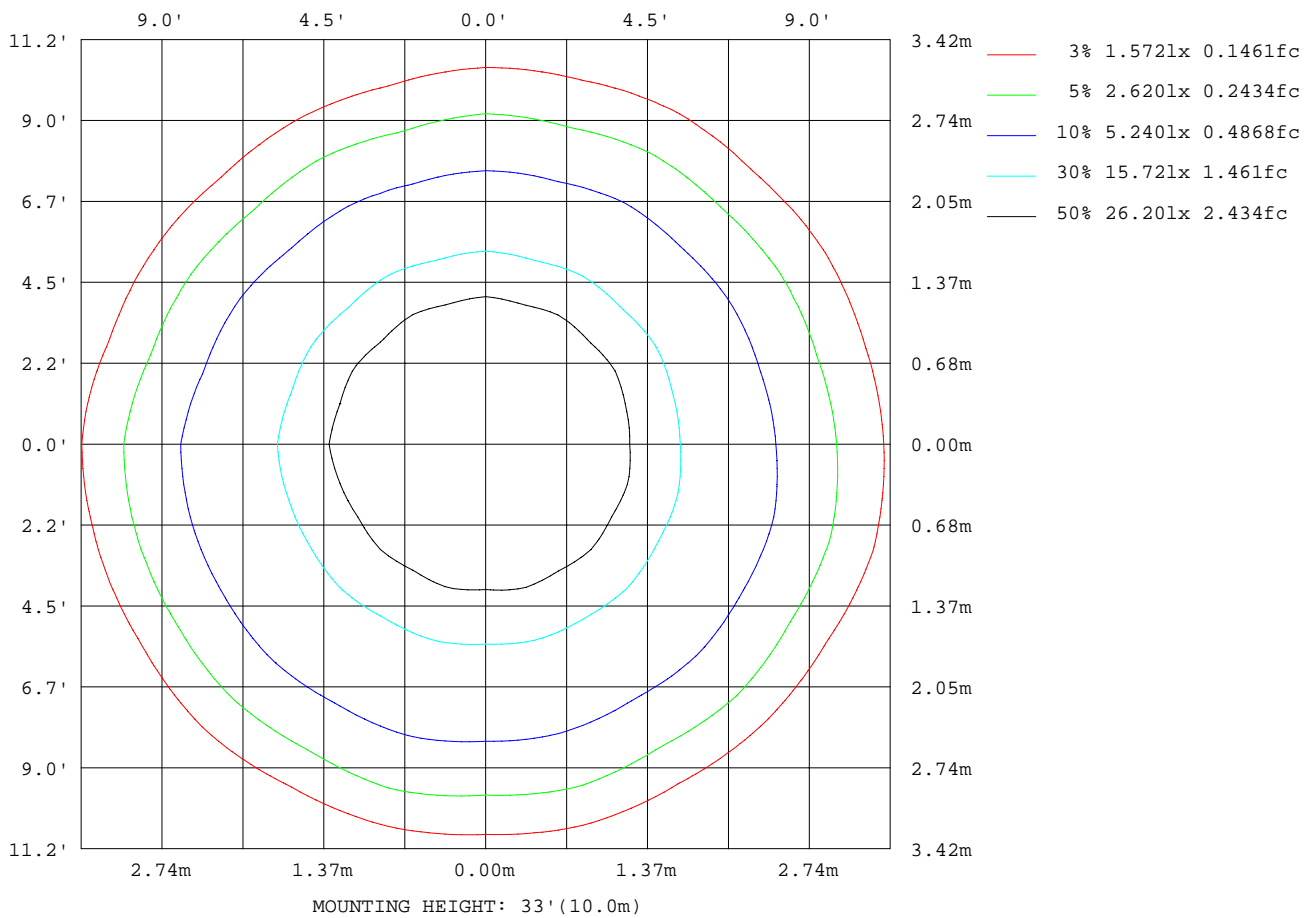
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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 V2.0.362  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	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 V2.0.362  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:225.1V I:0.0380A P:7.960W PF:0.9280 Freq:50.00Hz Lamp Flux:453.247x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:36	Shielding Angle:

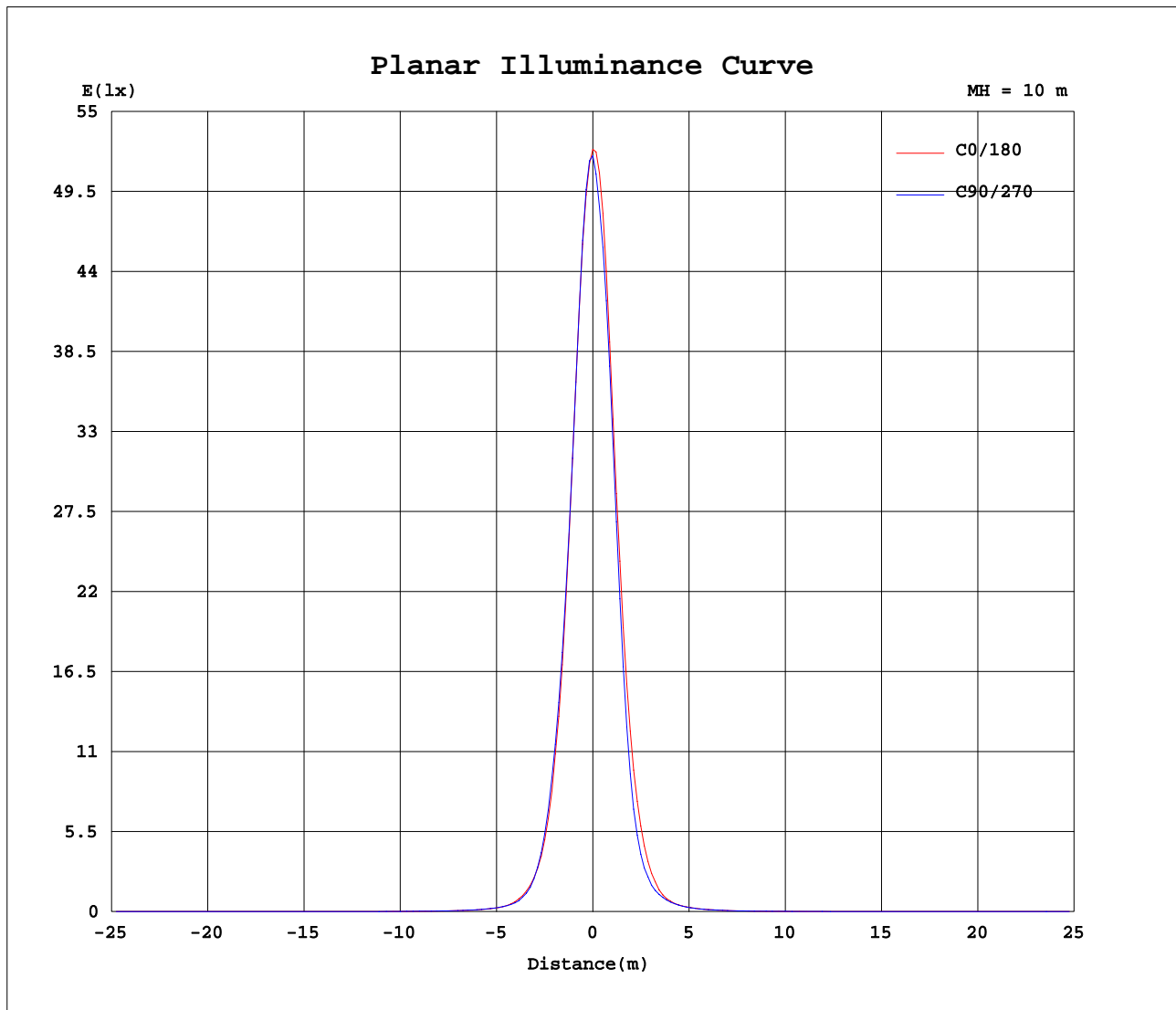
AvgL	cd/m2
L_0~180(65)av	0
L_0~180(75)av	0
L_0~180(85)av	0
L_90~270(65)av	0
L_90~270(75)av	0
L_90~270(85)av	0
L_45(65)av	0
L_45(75)av	0
L_45(85)av	0

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 V2.0.362  
 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: 2020-06-16

$\gamma$  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:

```

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:

```