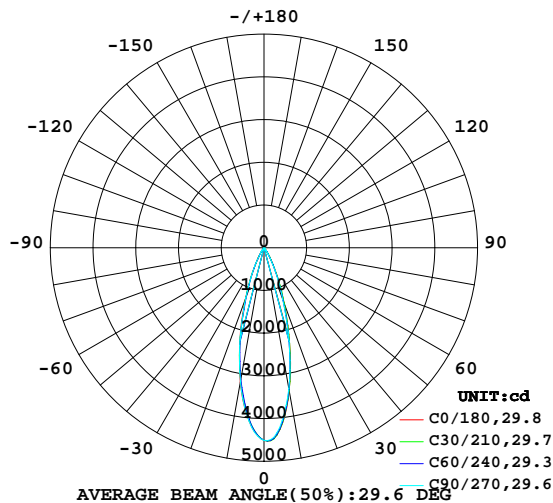


LUMINAIRE PHOTOMETRIC TEST REPORT

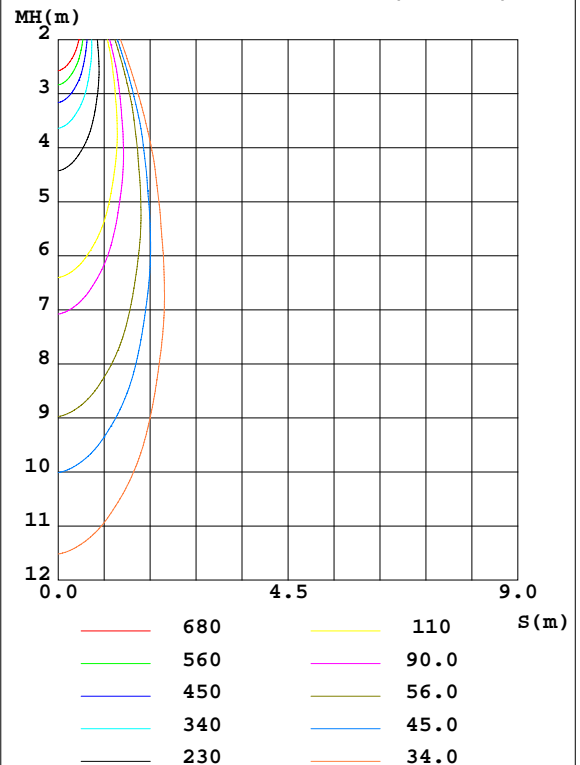
Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 50.94 lm/W
MODEL	ALT70-27G30-36	I _{max} (cd)	4528	S/MH(C0/180)	0.51	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.50	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1400.8	η UP,DN(C0-180)	0.0,49.0	
NOMINAL FLUX(lm)	1400.78	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.0	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225.1	η 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:2020-06-16

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:

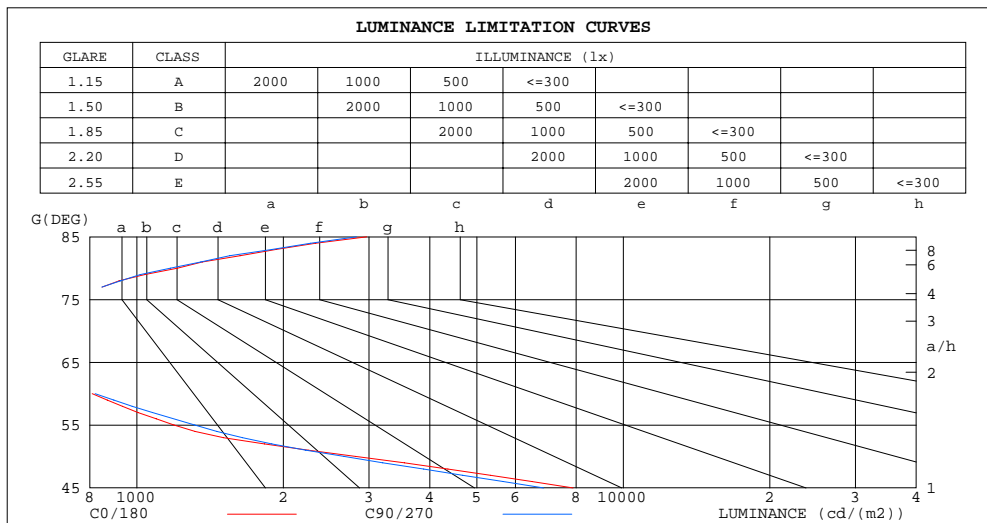
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	3201	3164	3179	3324	3397	3340	3345	3270	0- 10	368.2	368.2	26.3,26.3
20	1263	1245	1244	1377	1375	1312	1292	1310	10- 20	607.5	975.8	69.7,69.7
30	280.5	267.5	260.1	331.1	333.8	323.2	304.4	283.0	20- 30	318.8	1295	92.4,92.4
40	40.33	38.94	37.36	54.75	63.27	59.71	48.39	44.75	30- 40	84.03	1379	98.4,98.4
50	5.111	4.209	4.848	9.105	13.61	11.91	7.492	6.168	40- 50	16.93	1395	99.6,99.6
60	1.143	1.051	1.160	1.459	1.789	2.102	1.833	1.529	50- 60	3.145	1399	99.8,99.8
70	0.5517	0.5005	0.5246	0.5522	0.7387	0.8217	0.7196	0.6857	60- 70	0.9417	1400	99.9,99.9
80	0.5941	0.6063	0.5751	0.5994	0.4808	0.5241	0.4577	0.5014	70- 80	0.5950	1400	100,100
90	0.9270	0.9150	0.8728	0.8734	0.4068	0.4028	0.3992	0.4347	80- 90	0.6332	1401	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

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:

LUMINANCE LIMITATION CURVES

Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



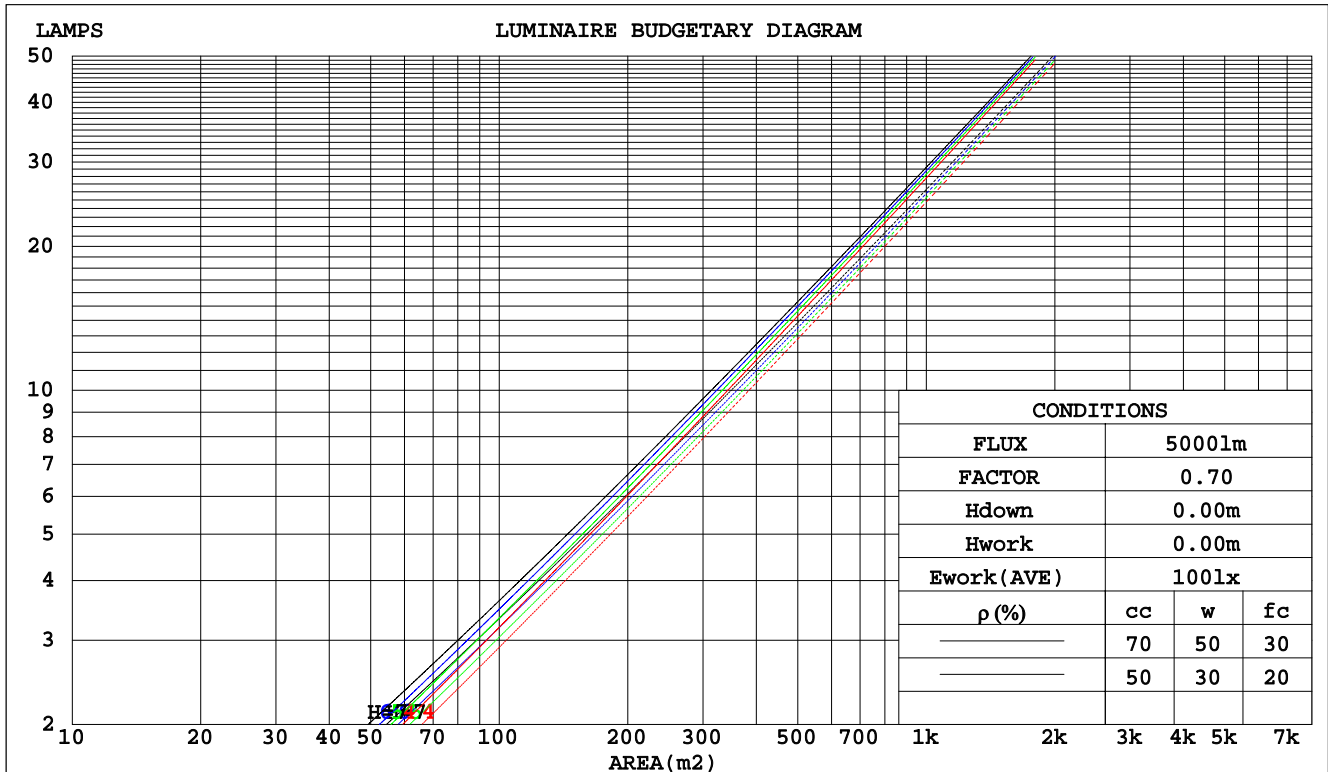
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-06-16

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 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	.00
1.0	1.12	1.10	1.09	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.01	1.00	.99	.98	.98	.96
2.0	1.07	1.03	1.01	1.05	1.02	.00	1.02	.99	.97	.99	.97	.95	.96	.95	.93	.92
3.0	1.01	.98	.94	1.00	.97	.94	.98	.95	.92	.95	.93	.91	.93	.91	.89	.88
4.0	.97	.93	.89	.96	.92	.89	.94	.90	.88	.92	.89	.87	.90	.88	.86	.85
5.0	.93	.88	.85	.92	.88	.85	.90	.87	.84	.89	.86	.83	.87	.85	.82	.81
6.0	.89	.84	.81	.88	.84	.81	.87	.83	.80	.86	.82	.80	.84	.82	.79	.78
7.0	.86	.81	.78	.85	.81	.78	.84	.80	.77	.83	.79	.77	.82	.79	.76	.75
8.0	.82	.78	.75	.82	.78	.75	.81	.77	.74	.80	.77	.74	.79	.76	.74	.73
9.0	.79	.75	.72	.79	.75	.72	.78	.74	.72	.77	.74	.71	.77	.73	.71	.70
10.0	.77	.72	.69	.76	.72	.69	.76	.72	.69	.75	.71	.69	.74	.71	.69	.68



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:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 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	.147	.083	.026	.140	.080	.025	.127	.073	.023	.116	.067	.021	.105	.061	.020	
2.0	.137	.075	.023	.131	.072	.022	.121	.067	.021	.112	.063	.020	.103	.058	.018	
3.0	.128	.068	.020	.124	.066	.020	.115	.062	.019	.107	.059	.018	.100	.055	.017	
4.0	.121	.063	.018	.117	.061	.018	.110	.058	.017	.103	.055	.017	.097	.053	.016	
5.0	.115	.058	.017	.111	.057	.017	.105	.055	.016	.099	.052	.016	.094	.050	.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	.049	.014	.097	.048	.014	.093	.046	.013	.089	.045	.013	.085	.044	.013	
9.0	.095	.046	.013	.093	.045	.013	.089	.044	.013	.086	.043	.012	.083	.042	.012	
10.0	.091	.044	.012	.090	.043	.012	.086	.042	.012	.083	.041	.012	.080	.040	.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
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	.169	.158	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.117	.130	.114	.101	.089	.079	.070	.051	.046	.041	.016	.015	.013	
3.0	.137	.113	.094	.118	.098	.082	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.125	.098	.077	.107	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.115	.086	.064	.099	.074	.056	.068	.052	.040	.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	.056	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.088	.056	.035	.076	.049	.030	.052	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.083	.051	.030	.072	.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:2020-06-16

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:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 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		11.0	11.7	11.2	11.8	12.0	10.5	11.2	10.7	11.4	11.5
	3H	10.8	11.5	11.1	11.7	11.9	10.4	11.0	10.6	11.2	11.4
	4H	10.7	11.4	11.0	11.6	11.8	10.3	10.9	10.6	11.1	11.3
	6H	10.7	11.3	11.0	11.5	11.7	10.2	10.8	10.5	11.1	11.3
	8H	10.7	11.2	10.9	11.5	11.7	10.2	10.8	10.5	11.0	11.3
	12H	10.6	11.2	11.0	11.5	11.7	10.2	10.7	10.5	11.0	11.3
4H	2H	10.7	11.4	11.0	11.6	11.8	10.3	10.9	10.5	11.1	11.3
	3H	10.6	11.1	10.9	11.4	11.7	10.1	10.7	10.4	10.9	11.2
	4H	10.5	11.0	10.8	11.3	11.6	10.0	10.5	10.4	10.8	11.1
	6H	10.4	10.9	10.8	11.2	11.5	10.0	10.4	10.3	10.7	11.1
	8H	10.4	10.8	10.8	11.2	11.5	10.0	10.4	10.3	10.7	11.1
	12H	10.4	10.8	10.8	11.2	11.6	10.0	10.4	10.4	10.7	11.1
8H	4H	10.3	10.8	10.7	11.1	11.5	9.9	10.3	10.3	10.7	11.0
	6H	10.3	10.6	10.7	11.0	11.4	9.8	10.2	10.3	10.6	11.0
	8H	10.3	10.6	10.7	11.0	11.4	9.8	10.1	10.3	10.6	11.0
	12H	10.4	10.6	10.8	11.1	11.5	9.9	10.2	10.4	10.6	11.1
12H	4H	10.3	10.7	10.7	11.0	11.4	9.8	10.2	10.2	10.6	11.0
	6H	10.2	10.5	10.7	11.0	11.4	9.8	10.1	10.2	10.5	10.9
	8H	10.3	10.5	10.7	11.0	11.4	9.8	10.1	10.3	10.5	11.0
Variations with the observer position at spacings:											
S = 1.0H	+ 4.0 / - 7.9					+ 3.8 / - 7.5					
1.5H	+ 6.4 / - 7.7					+ 6.2 / - 7.3					
2.0H	+ 5.8 / - 2.2					+ 5.4 / - 1.8					

CIE Pub.117, 1401 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.2$)

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:

UTILIZATION FACTORS TABLE

Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

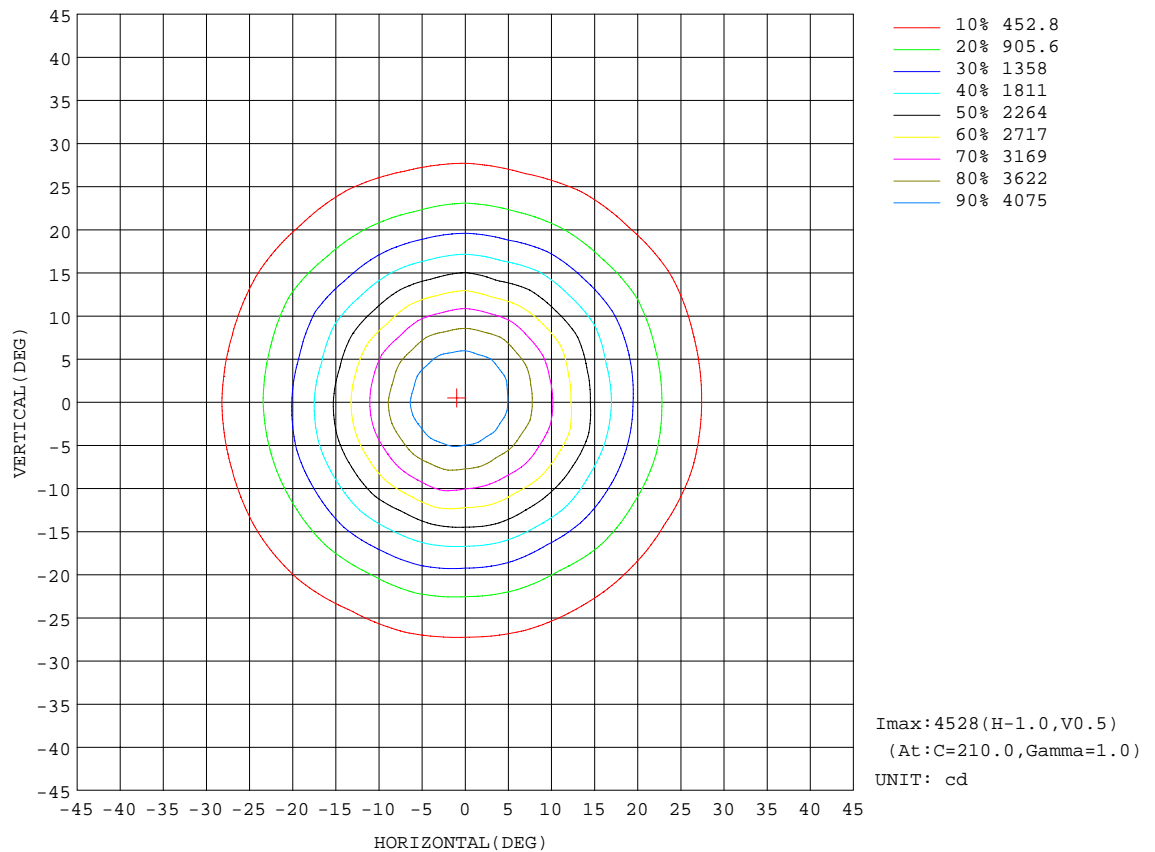
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	81	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	91	88	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	102	100	104	101	99	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	107	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	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

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:

ISOCANDELA DIAGRAM

Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



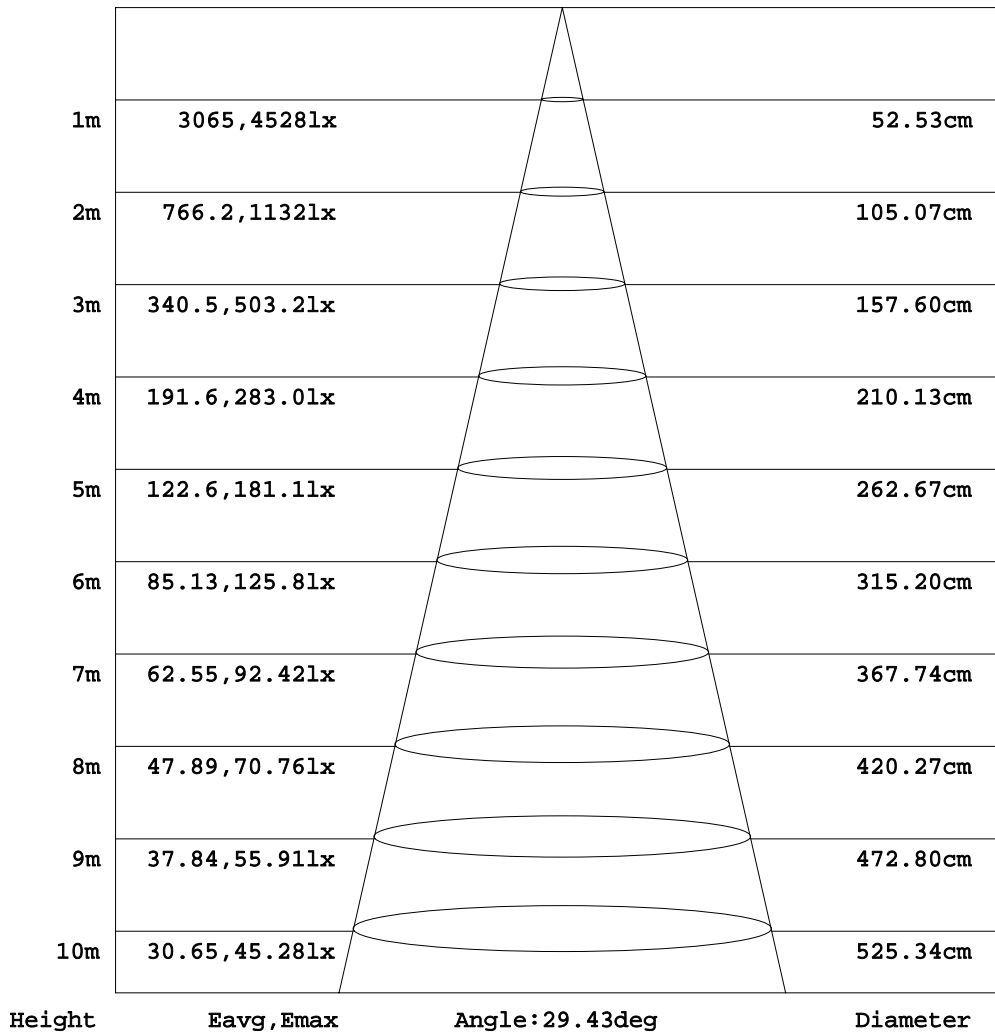
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-06-16

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:

AAI Figure

Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

Flux out:691.3 lm



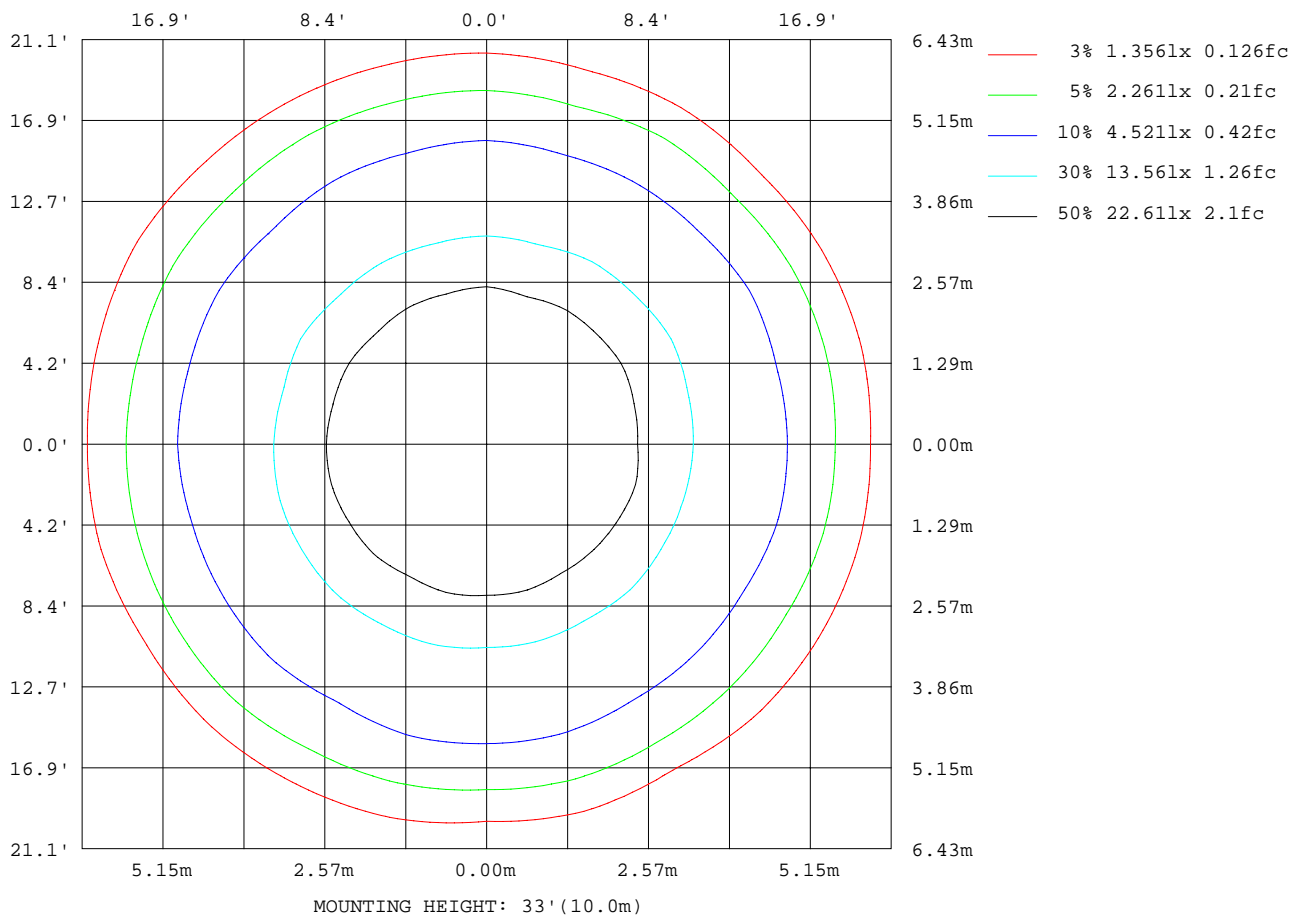
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 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

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:

LED Avg.L Report

Test:U:225.2V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1400.78x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

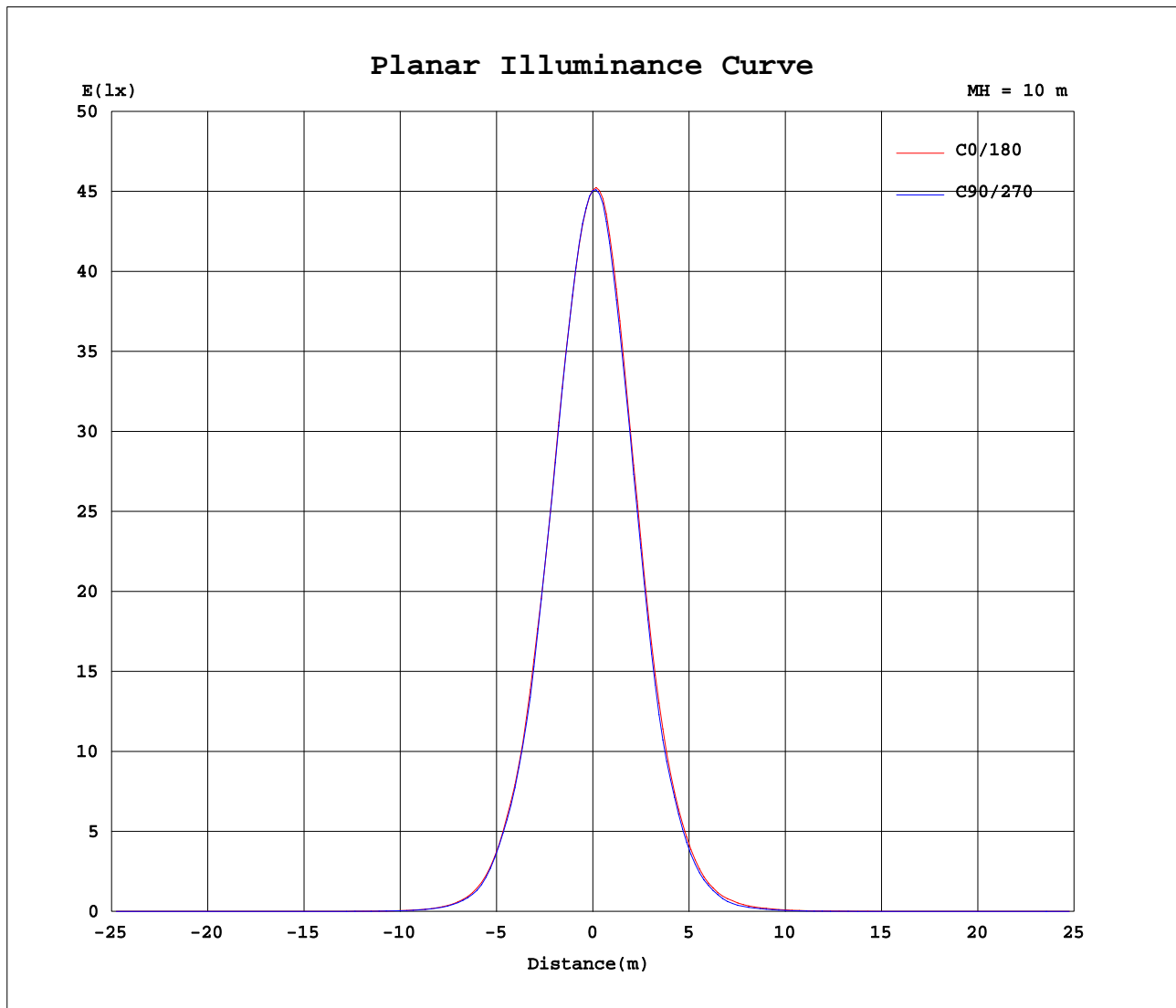
AvgL	cd/m2
L_0~180(65)av	753
L_0~180(75)av	753
L_0~180(85)av	2309
L_90~270(65)av	736
L_90~270(75)av	733
L_90~270(85)av	2232
L_45(65)av	765
L_45(75)av	767
L_45(85)av	2368

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

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:

```

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:

```

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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:

```