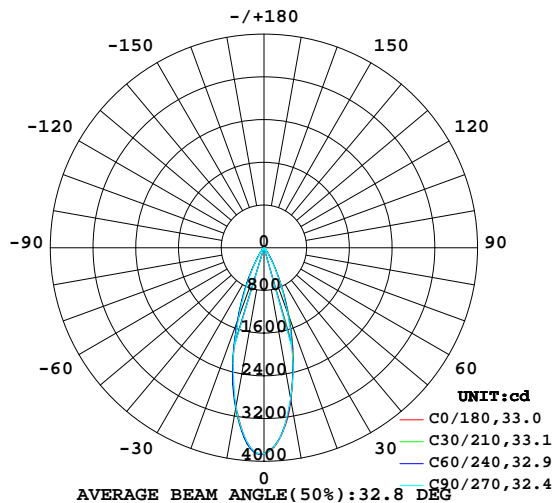


LUMINAIRE PHOTOMETRIC TEST REPORT

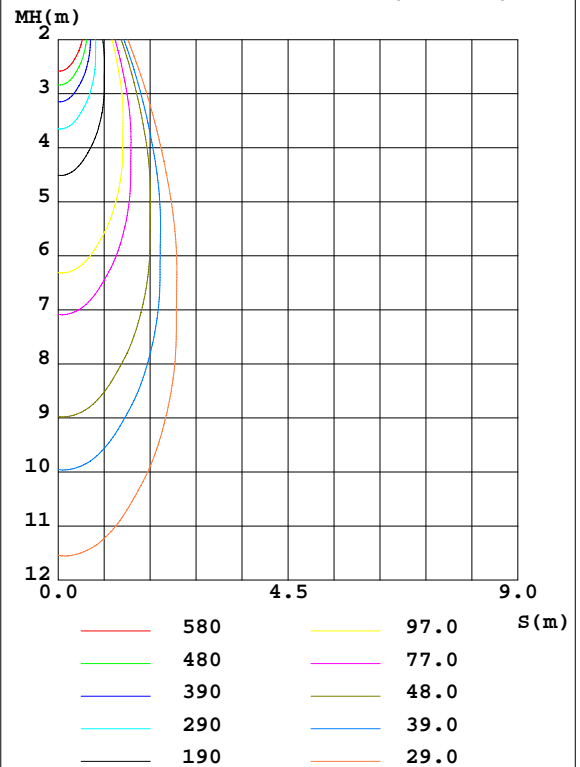
Test:U:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 51.28 lm/W
MODEL	ALT70-27G30-40	I _{max} (cd)	3876	S/MH(C0/180)	0.54	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.52	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1410.3	η UP,DN(C0-180)	0.0,51.6	
NOMINAL FLUX(lm)	1410.34	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.4	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225.1	η down(%)	100.0	CIBSE SHR MAX	0.55	

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:

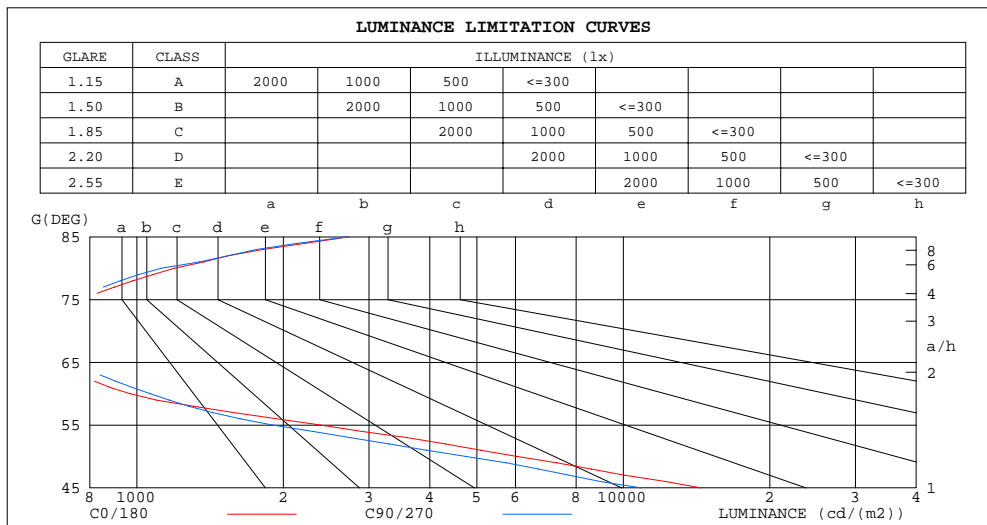
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	3024	3078	3025	3005	2904	2865	2868	2935	0- 10	323.1	323.1	22.9,22.9
20	1422	1525	1387	1418	1370	1333	1297	1344	10- 20	591.5	914.6	64.9,64.9
30	403.3	422.3	372.1	373.9	374.7	352.3	330.1	361.7	20- 30	359.4	1274	90.3,90.3
40	71.16	72.02	62.40	63.58	64.36	58.86	46.69	58.39	30- 40	109.4	1383	98.1,98.1
50	10.96	10.84	8.612	8.558	10.09	7.488	6.198	8.041	40- 50	21.47	1405	99.6,99.6
60	1.367	1.751	1.504	1.526	1.277	1.429	1.223	1.572	50- 60	3.317	1408	99.8,99.8
70	0.5906	0.6337	0.6067	0.5990	0.5937	0.6657	0.6057	0.7289	60- 70	0.9245	1409	99.9,99.9
80	0.5860	0.5950	0.5515	0.5955	0.4524	0.4776	0.4403	0.4937	70- 80	0.5791	1410	100,100
90	0.8679	0.8688	0.8645	0.8735	0.4770	0.4657	0.4460	0.4348	80- 90	0.6233	1410	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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2732	2715
80	1195	1124
75	768	739
70	612	628
65	685	738
60	968	1065
55	2387	1903
50	6037	4743
45	14449	10900

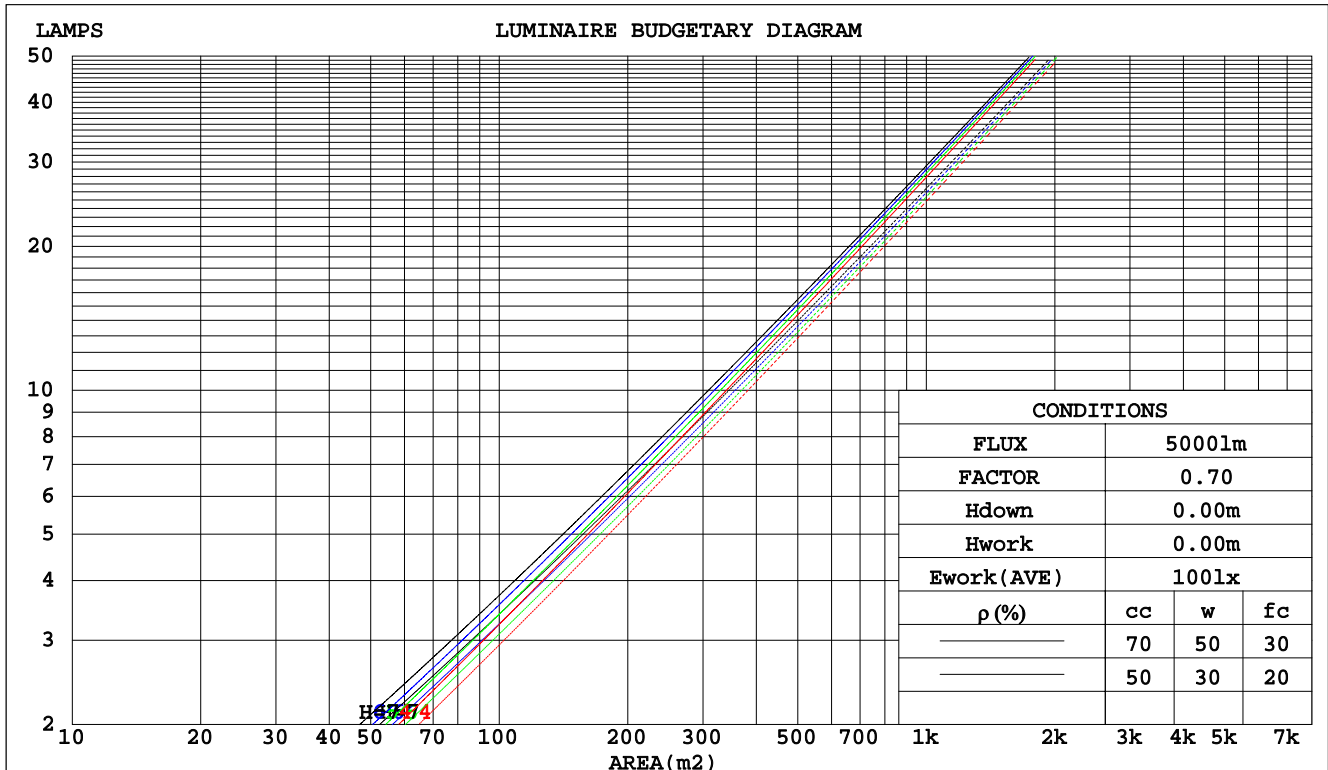
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	.90	1.04	1.01	.99	1.01	.99	.97	.98	.96	.95	.96	.94	.93	.91
3.0	1.01	.97	.93	.99	.96	.93	.97	.94	.91	.95	.92	.90	.92	.90	.88	.87
4.0	.96	.91	.88	.95	.91	.87	.93	.89	.86	.91	.88	.85	.89	.87	.85	.83
5.0	.91	.87	.83	.91	.86	.83	.89	.85	.82	.87	.84	.82	.86	.83	.81	.80
6.0	.88	.83	.79	.87	.82	.79	.85	.81	.79	.84	.81	.78	.83	.80	.78	.76
7.0	.84	.79	.76	.83	.79	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.73
8.0	.81	.76	.72	.80	.75	.72	.79	.75	.72	.78	.74	.72	.77	.74	.71	.70
9.0	.77	.73	.69	.77	.72	.69	.76	.72	.69	.75	.72	.69	.75	.71	.69	.68
10.0	.75	.70	.67	.74	.70	.67	.73	.69	.67	.73	.69	.66	.72	.69	.66	.65



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:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 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	.151	.086	.027	.144	.082	.026	.132	.076	.024	.120	.069	.022	.110	.064	.021	
2.0	.142	.078	.024	.136	.075	.023	.126	.070	.022	.116	.065	.020	.107	.061	.019	
3.0	.133	.071	.021	.129	.069	.021	.120	.065	.020	.112	.061	.019	.104	.058	.018	
4.0	.126	.065	.019	.122	.064	.019	.115	.061	.018	.108	.058	.017	.101	.055	.017	
5.0	.119	.061	.018	.116	.060	.017	.110	.057	.017	.104	.055	.016	.098	.053	.016	
6.0	.114	.057	.016	.111	.056	.016	.105	.054	.016	.100	.052	.015	.095	.050	.015	
7.0	.108	.054	.015	.106	.053	.015	.101	.051	.015	.097	.050	.014	.092	.048	.014	
8.0	.104	.051	.014	.102	.050	.014	.097	.049	.014	.093	.047	.014	.089	.046	.013	
9.0	.100	.048	.013	.098	.048	.013	.094	.046	.013	.090	.045	.013	.087	.044	.013	
10.0	.096	.046	.013	.094	.045	.013	.090	.044	.012	.087	.043	.012	.084	.042	.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	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.130	.114	.100	.089	.079	.070	.052	.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	.109	.085	.067	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.064	.100	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.069	.046	.087	.059	.040	.060	.042	.028	.035	.025	.017	.011	.008	.006	
8.0	.095	.062	.039	.082	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.090	.057	.034	.077	.049	.030	.054	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.085	.052	.030	.073	.045	.026	.051	.032	.018	.030	.019	.011	.010	.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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 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	14.6	15.4	14.9	15.6	15.7	14.1	14.9	14.3	15.0	15.2	
	3H	14.5	15.2	14.7	15.4	15.6	14.0	14.7	14.2	14.8	15.0
	4H	14.4	15.1	14.7	15.3	15.5	13.9	14.5	14.1	14.8	15.0
	6H	14.3	15.0	14.6	15.2	15.4	13.8	14.4	14.1	14.7	14.9
	8H	14.3	14.9	14.6	15.1	15.4	13.8	14.4	14.1	14.6	14.9
	12H	14.3	14.8	14.6	15.1	15.4	13.7	14.3	14.0	14.6	14.8
4H	2H	14.4	15.1	14.7	15.3	15.5	13.9	14.5	14.1	14.8	15.0
	3H	14.2	14.8	14.5	15.1	15.3	13.7	14.3	14.0	14.5	14.8
	4H	14.1	14.7	14.5	15.0	15.3	13.6	14.1	14.0	14.4	14.7
	6H	14.1	14.5	14.4	14.9	15.2	13.5	14.0	13.9	14.3	14.7
	8H	14.0	14.4	14.4	14.8	15.2	13.5	13.9	13.9	14.3	14.6
	12H	14.0	14.4	14.4	14.8	15.1	13.5	13.9	13.9	14.2	14.6
8H	4H	14.0	14.4	14.4	14.8	15.1	13.5	13.9	13.9	14.3	14.6
	6H	13.9	14.3	14.3	14.7	15.1	13.4	13.7	13.8	14.1	14.5
	8H	13.9	14.2	14.3	14.6	15.0	13.3	13.7	13.8	14.1	14.5
	12H	13.8	14.1	14.3	14.6	15.0	13.3	13.6	13.8	14.0	14.5
12H	4H	13.9	14.3	14.4	14.7	15.1	13.4	13.8	13.8	14.2	14.6
	6H	13.9	14.2	14.3	14.6	15.0	13.3	13.6	13.8	14.1	14.5
	8H	13.8	14.1	14.3	14.5	15.0	13.3	13.6	13.8	14.0	14.5
Variations with the observer position at spacings:											
S = 1.0H	+ 3.5 / -11.7					+ 2.9 / -10.9					
1.5H	+ 5.8 / -10.6					+ 5.3 / -10.0					
2.0H	+ 6.2 / - 5.8					+ 5.7 / - 4.5					

CIE Pub.117, 1410 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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

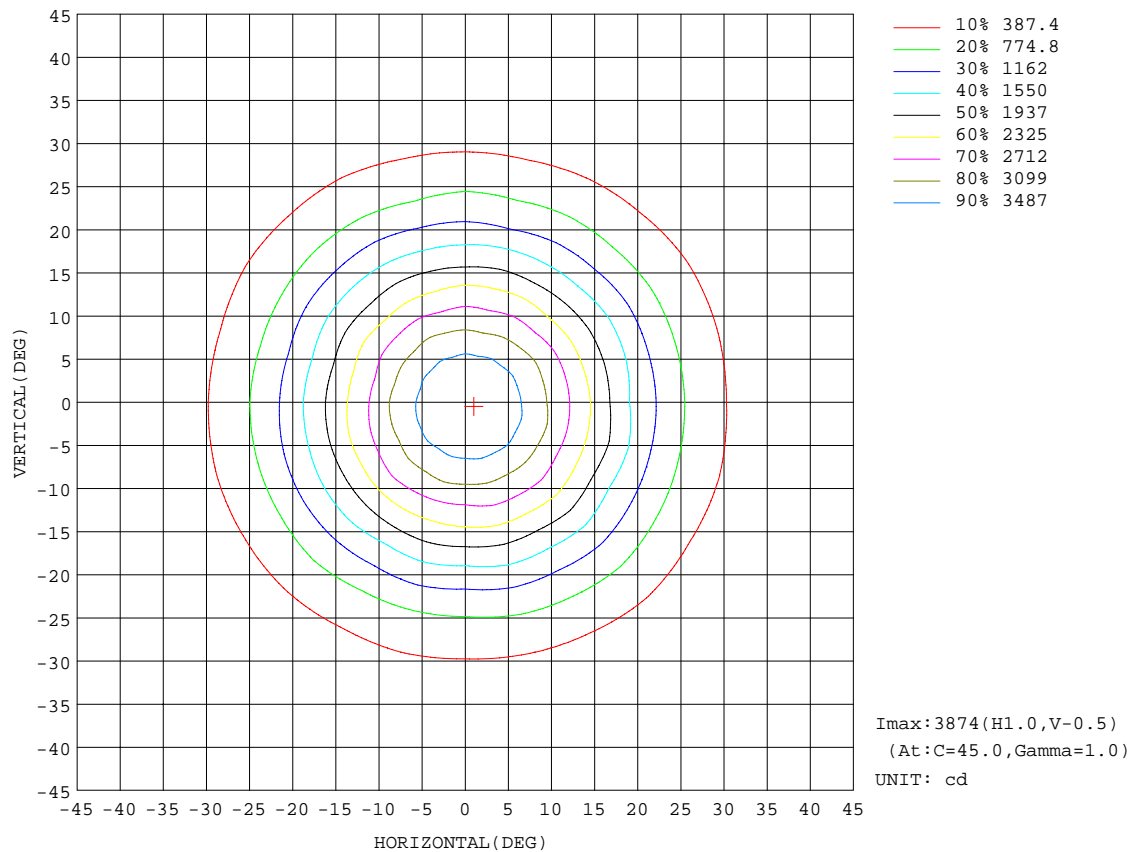
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	85	81	90	84	81	89	84	81	78
0.80	97	92	89	97	92	89	96	91	88	85
1.00	101	96	93	100	96	93	99	95	92	89
1.25	105	100	97	104	100	97	102	98	96	92
1.50	107	103	100	106	102	100	104	101	98	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	108	109	107	106	99
5.00	116	114	112	113	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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

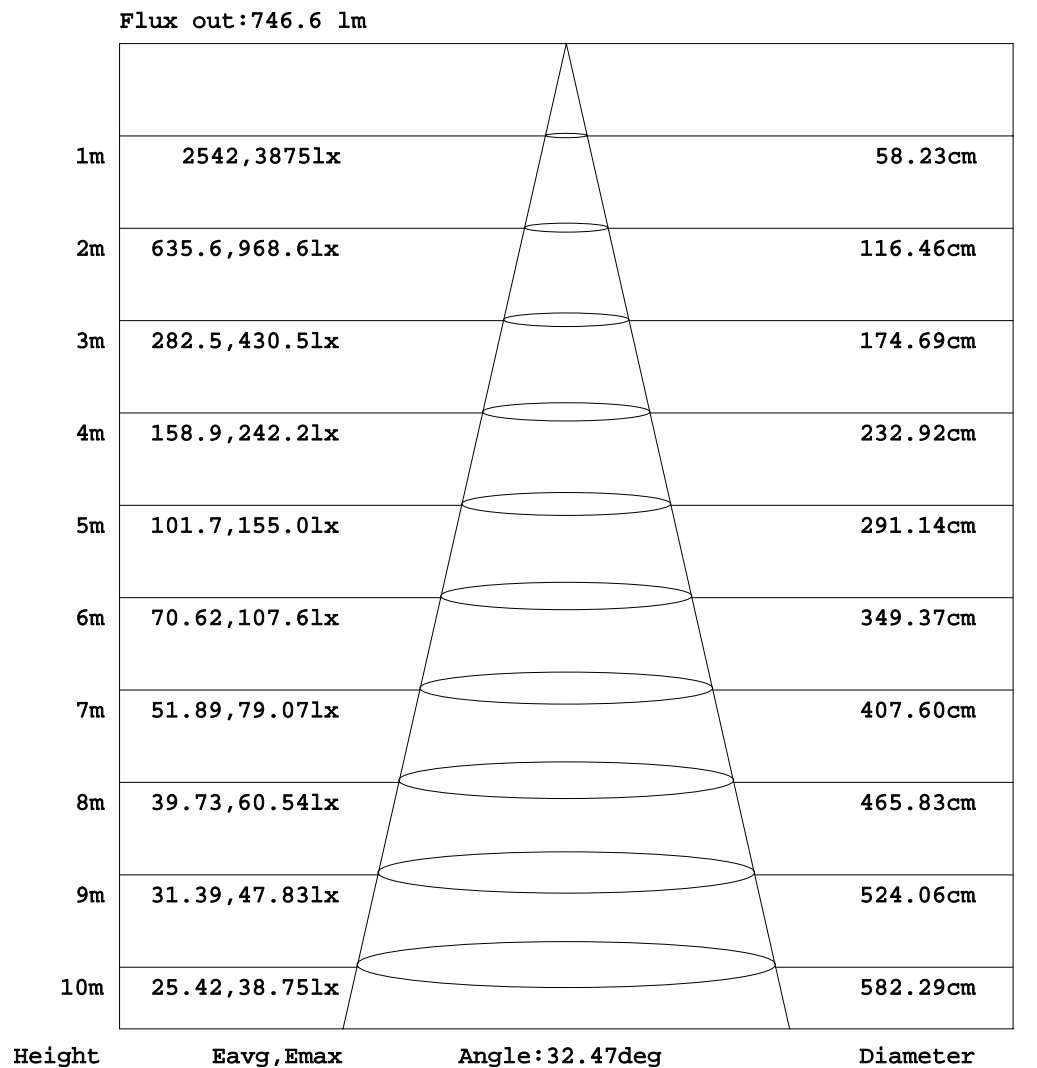


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



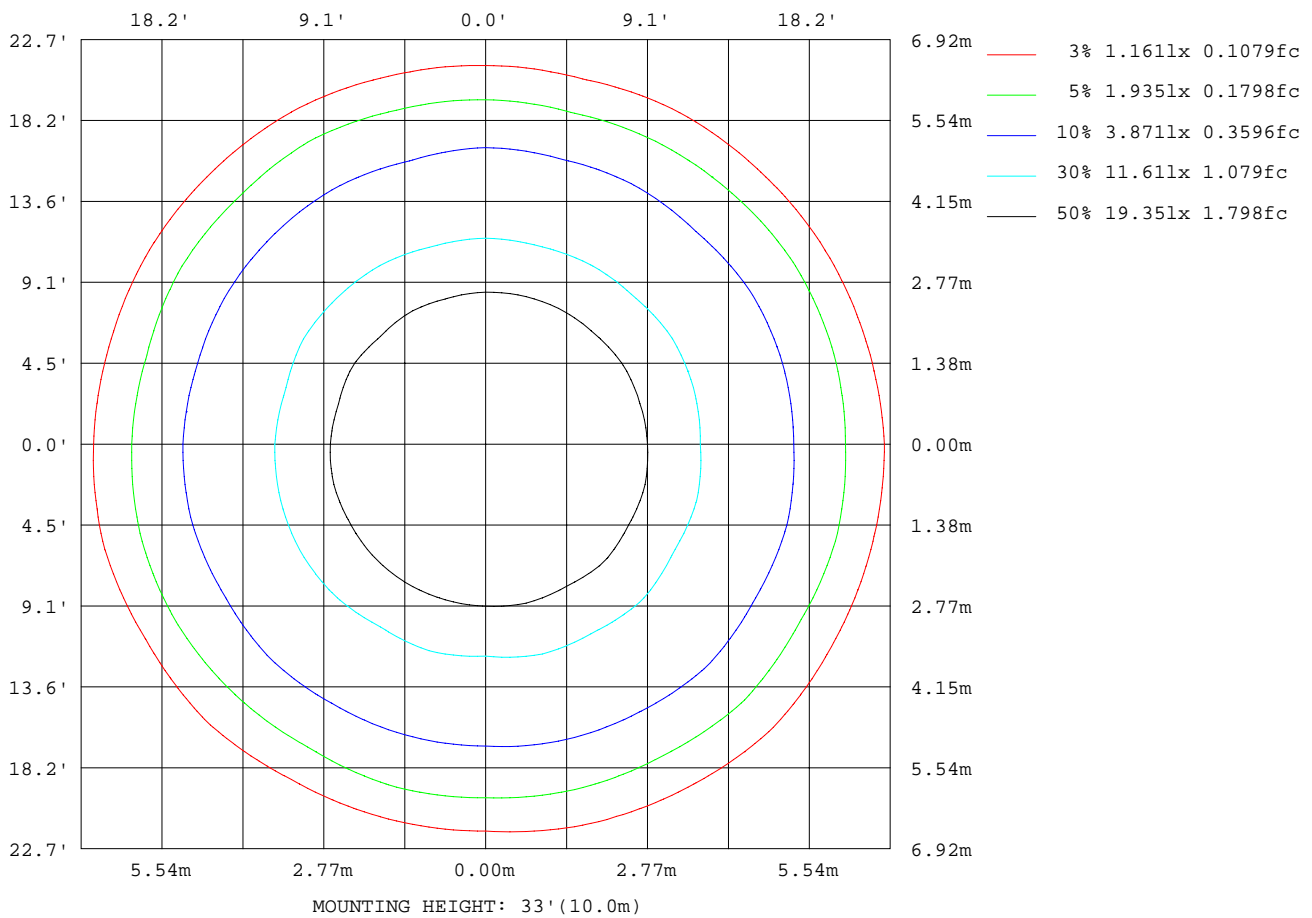
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 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:225.1V I:0.1280A P:27.50W PF:0.9510 Freq:50.00Hz Lamp Flux:1410.34x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

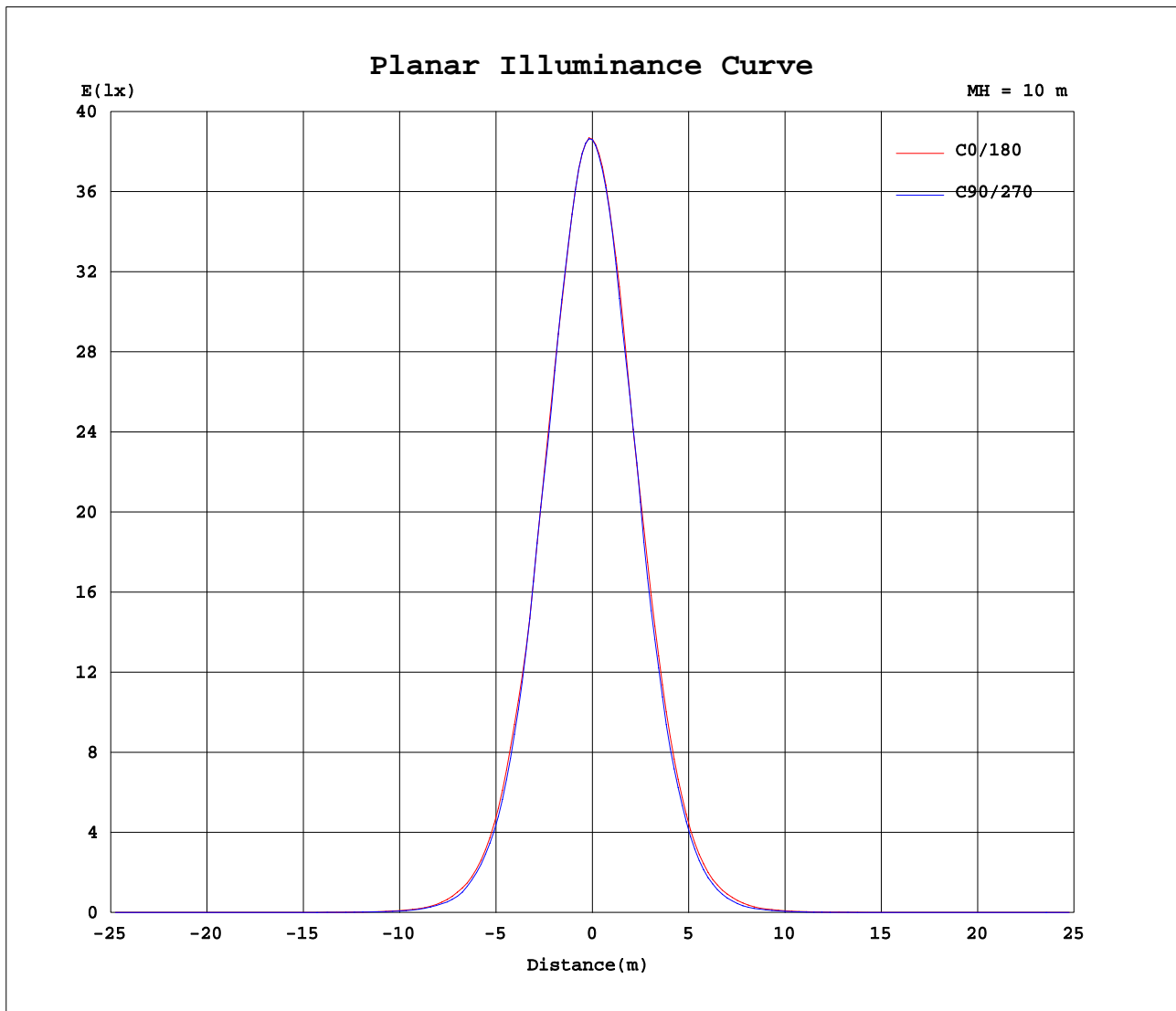
AvgL	cd/m2
L_0~180(65)av	674
L_0~180(75)av	715
L_0~180(85)av	2259
L_90~270(65)av	699
L_90~270(75)av	698
L_90~270(85)av	2207
L_45(65)av	803
L_45(75)av	766
L_45(85)av	2282

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:

```

```

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:

```