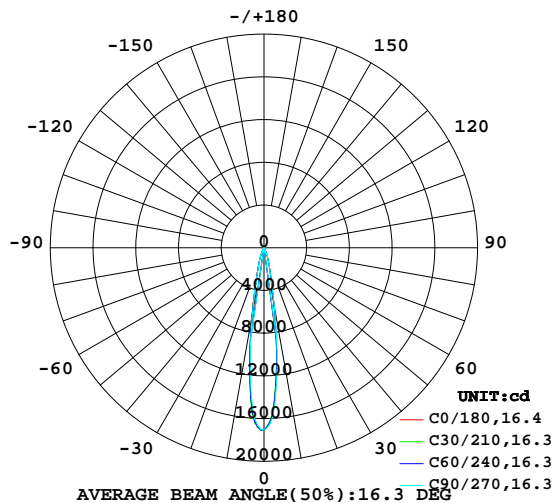


LUMINAIRE PHOTOMETRIC TEST REPORT

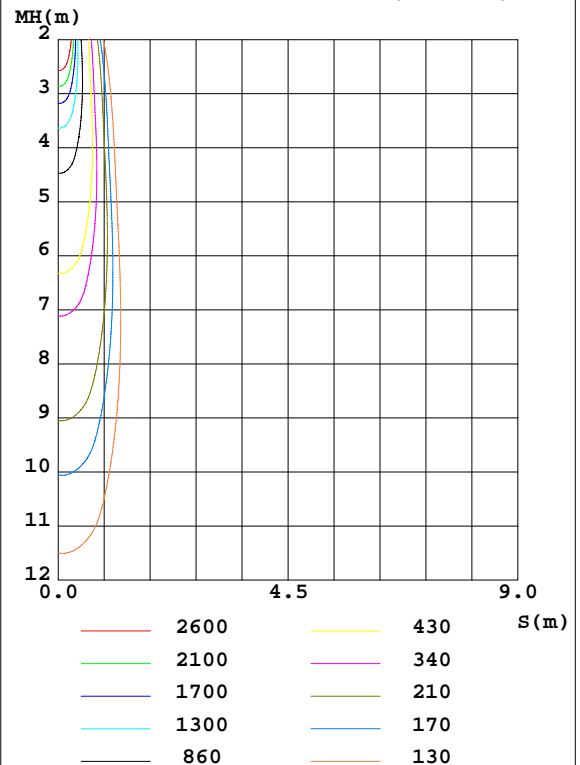
Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 72.75 lm/W
MODEL	ALT70-27G30-15	I _{max} (cd)	17141	S/MH(C0/180)	0.27	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.27	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1978.7	η UP,DN(C0-180)	0.0,51.9	
NOMINAL FLUX(lm)	1978.68	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.1	
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:

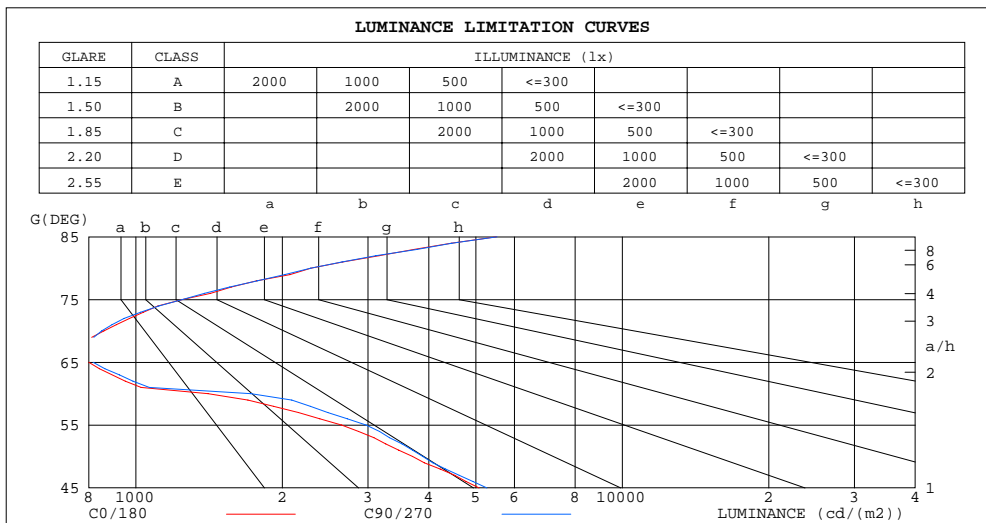
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	650.7	680.0	625.6	591.6	551.8	520.2	564.5	589.3	0- 10	1027	1027	51.9,51.9
20	118.0	123.7	115.7	110.5	103.6	102.7	108.4	113.4	10- 20	693.2	1720	86.9,86.9
30	9.451	9.377	8.546	8.283	7.481	7.080	8.025	8.170	20- 30	219.5	1940	98,98
40	1.655	1.851	1.777	1.698	1.632	1.527	1.672	1.650	30- 40	23.27	1963	99.2,99.2
50	0.6682	0.7328	0.7068	0.6546	0.6665	0.6384	0.6778	0.6827	40- 50	8.208	1971	99.6,99.6
60	0.1976	0.2696	0.2439	0.1757	0.1817	0.1843	0.2191	0.2239	50- 60	3.928	1975	99.8,99.8
70	0.0825	0.0778	0.0823	0.0804	0.1124	0.1196	0.1179	0.1171	60- 70	1.196	1976	99.9,99.9
80	0.1116	0.1131	0.1124	0.1158	0.1201	0.1219	0.1187	0.1228	70- 80	1.129	1977	99.9,99.9
90	0.1551	0.1564	0.1555	0.1581	0.0696	0.0692	0.0682	0.0726	80- 90	1.289	1979	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:×10cd									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 V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	5511	5527
80	2289	2288
75	1246	1246
70	859	850
65	800	817
60	1408	1724
55	2647	2973
50	3702	3887
45	5074	5267

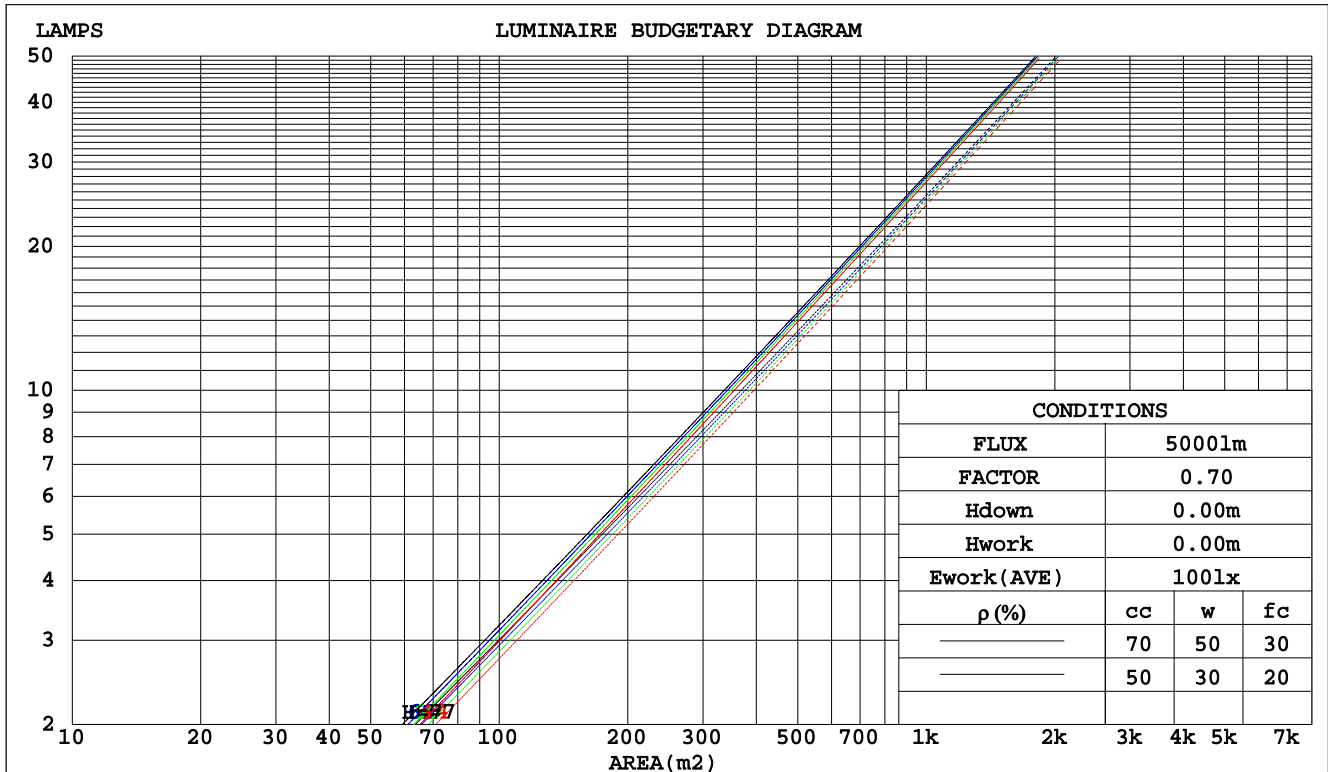
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 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	1.14	1.12	1.10	1.11	1.10	1.09	1.07	1.06	1.05	1.04	1.03	1.02	1.00	.00	.99	.98
2.0	1.09	1.06	1.04	1.07	1.05	1.03	1.04	1.02	1.01	1.01	.00	.99	.99	.98	.97	.95
3.0	1.05	1.02	.99	1.04	1.01	.99	1.01	.99	.97	.99	.97	.96	.97	.96	.94	.93
4.0	1.02	.98	.96	1.01	.98	.95	.99	.96	.94	.97	.95	.93	.95	.94	.92	.91
5.0	.99	.95	.93	.98	.95	.92	.97	.94	.92	.95	.93	.91	.94	.92	.90	.89
6.0	.96	.93	.90	.96	.92	.90	.94	.91	.89	.93	.91	.89	.92	.90	.88	.87
7.0	.94	.90	.88	.93	.90	.88	.92	.89	.87	.91	.89	.87	.90	.88	.86	.86
8.0	.92	.88	.86	.91	.88	.86	.90	.88	.85	.90	.87	.85	.89	.87	.85	.84
9.0	.90	.86	.84	.89	.86	.84	.89	.86	.84	.88	.85	.83	.87	.85	.83	.82
10.0	.88	.85	.82	.88	.84	.82	.87	.84	.82	.86	.84	.82	.86	.84	.82	.81



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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 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	.124	.071	.022	.118	.067	.021	.105	.061	.019	.094	.054	.017	.084	.049	.016	
2.0	.114	.062	.019	.108	.060	.018	.098	.055	.017	.089	.050	.016	.080	.045	.014	
3.0	.105	.056	.017	.100	.054	.016	.092	.050	.015	.084	.046	.014	.077	.043	.013	
4.0	.097	.051	.015	.094	.049	.014	.087	.046	.014	.080	.043	.013	.074	.040	.012	
5.0	.091	.046	.013	.088	.045	.013	.082	.043	.013	.076	.040	.012	.071	.038	.011	
6.0	.085	.043	.012	.083	.042	.012	.078	.040	.012	.073	.038	.011	.069	.036	.011	
7.0	.081	.040	.011	.078	.039	.011	.074	.037	.011	.070	.036	.010	.066	.034	.010	
8.0	.076	.037	.010	.074	.037	.010	.071	.035	.010	.067	.034	.010	.064	.033	.010	
9.0	.073	.035	.010	.071	.035	.010	.068	.033	.009	.065	.032	.009	.062	.031	.009	
10.0	.069	.033	.009	.068	.033	.009	.065	.032	.009	.062	.031	.009	.060	.030	.009	

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	.149	.143	.135	.128	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.148	.133	.120	.127	.114	.103	.087	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.133	.113	.098	.114	.098	.085	.078	.068	.059	.045	.040	.035	.014	.013	.011	
4.0	.119	.098	.081	.102	.084	.070	.070	.059	.050	.041	.034	.029	.013	.011	.010	
5.0	.108	.085	.068	.093	.074	.059	.064	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.099	.075	.058	.085	.065	.050	.059	.045	.035	.034	.027	.021	.011	.009	.007	
7.0	.091	.066	.049	.078	.058	.043	.054	.040	.030	.031	.024	.018	.010	.008	.006	
8.0	.084	.059	.043	.072	.052	.037	.050	.036	.026	.029	.021	.016	.009	.007	.005	
9.0	.078	.054	.037	.067	.047	.032	.047	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.073	.049	.033	.063	.042	.028	.044	.030	.020	.025	.018	.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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 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	2.0	2.6	2.2	2.7	2.9	2.5	3.0	2.6	3.2	3.3
	3H	2.0	2.5	2.2	2.7	2.9	2.4	2.9	2.6	3.1	3.3
	4H	2.0	2.5	2.3	2.7	3.0	2.4	2.9	2.7	3.1	3.3
	6H	2.3	2.8	2.6	3.0	3.2	2.7	3.1	2.9	3.4	3.6
	8H	2.7	3.1	2.9	3.4	3.6	3.0	3.4	3.3	3.7	3.9
	12H	3.2	3.7	3.5	3.9	4.2	3.5	4.0	3.8	4.2	4.5
4H	2H	1.9	2.4	2.2	2.6	2.8	2.3	2.8	2.6	3.0	3.2
	3H	1.9	2.4	2.2	2.6	2.9	2.3	2.7	2.6	3.0	3.3
	4H	2.0	2.4	2.4	2.7	3.0	2.4	2.8	2.7	3.1	3.4
	6H	2.5	2.9	2.9	3.2	3.6	2.8	3.2	3.2	3.5	3.9
	8H	3.1	3.4	3.5	3.8	4.1	3.3	3.7	3.7	4.0	4.4
	12H	4.0	4.3	4.4	4.7	5.0	4.2	4.5	4.6	4.9	5.3
8H	4H	2.0	2.4	2.4	2.7	3.1	2.4	2.7	2.8	3.1	3.4
	6H	2.8	3.1	3.2	3.5	3.9	3.1	3.4	3.5	3.7	4.2
	8H	3.6	3.9	4.0	4.3	4.7	3.8	4.1	4.3	4.5	4.9
	12H	4.9	5.1	5.3	5.5	6.0	5.0	5.3	5.5	5.7	6.2
12H	4H	2.1	2.4	2.5	2.7	3.1	2.4	2.7	2.8	3.1	3.5
	6H	2.9	3.2	3.4	3.6	4.0	3.2	3.5	3.6	3.9	4.3
	8H	3.9	4.1	4.3	4.5	5.0	4.1	4.3	4.5	4.7	5.2
Variations with the observer position at spacings:											
S = 1.0H	+ 1.3 / - 1.5					+ 1.3 / - 1.5					
1.5H	+ 2.3 / - 1.0					+ 2.3 / - 0.9					
2.0H	+ 1.4 / - 1.0					+ 1.5 / - 1.1					

CIE Pub.117, 1979 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.4$)

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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

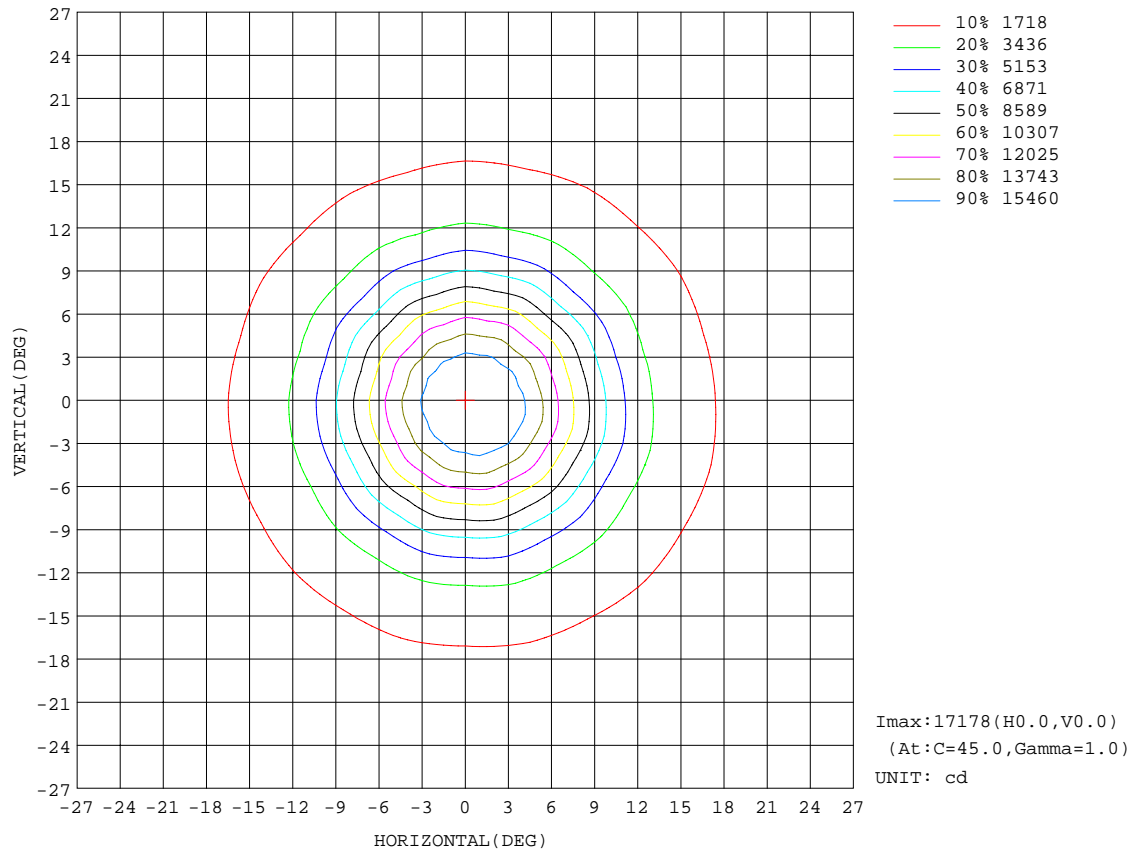
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	91	85	82	90	85	82	79
0.80	98	93	90	97	93	89	96	92	89	86
1.00	102	97	94	101	96	93	99	96	93	89
1.25	105	101	98	104	100	97	102	99	96	93
1.50	108	103	101	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	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 V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



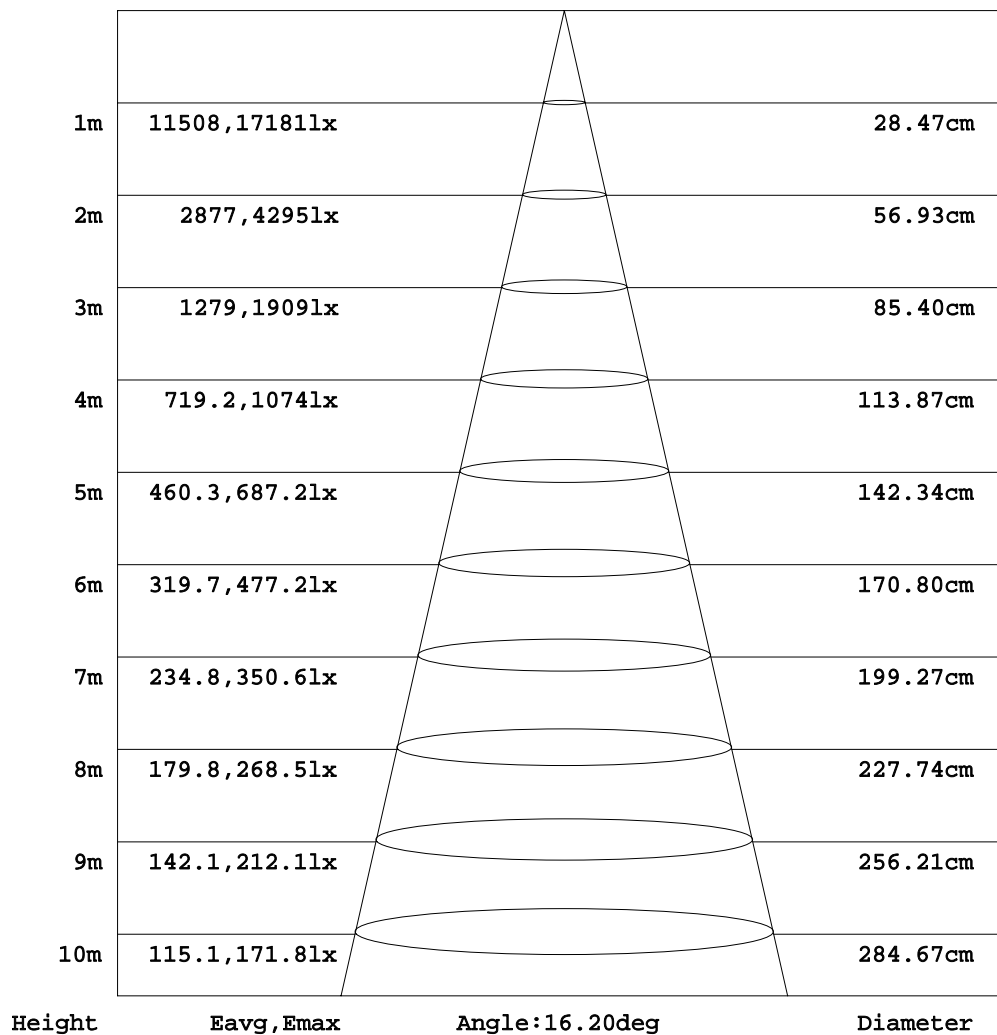
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

AAI Figure

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

Flux out:906.9 lm



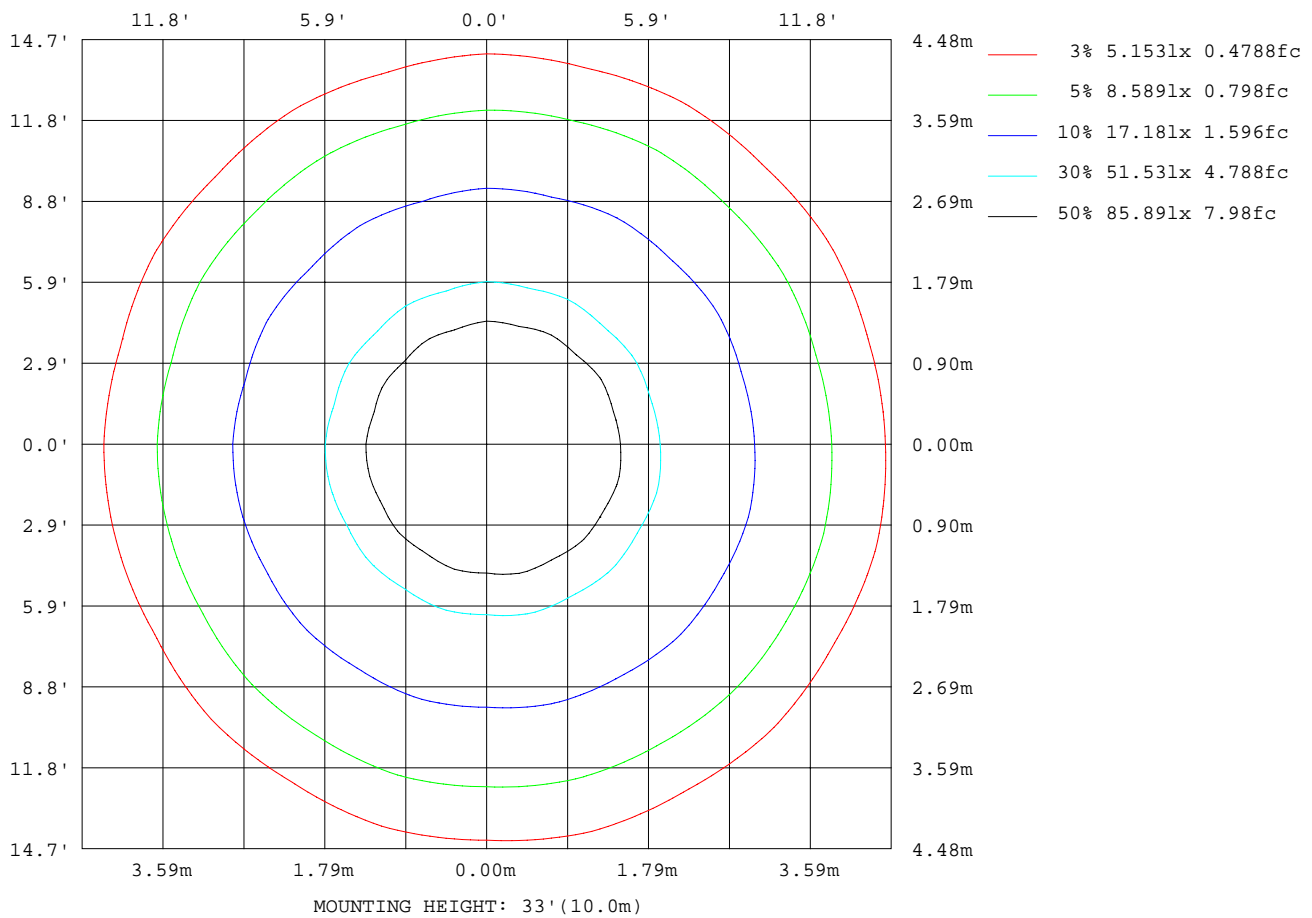
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

ISOLUX DIAGRAM

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 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 V2.0.362
 Humidity: 65.0%
 Test Distance: 7.240m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1978.68x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

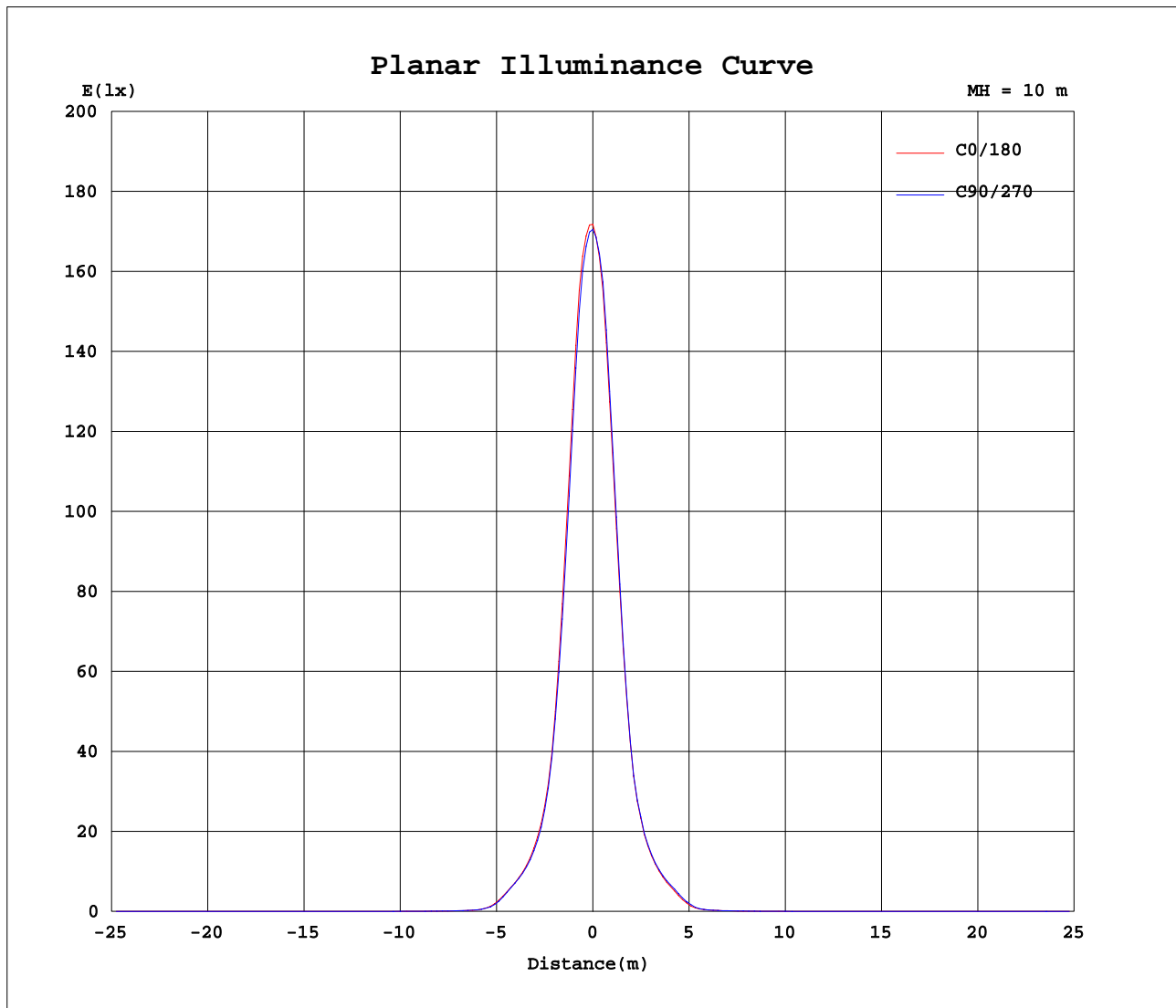
AvgL	cd/m2
L_0~180(65)av	905
L_0~180(75)av	1440
L_0~180(85)av	4724
L_90~270(65)av	951
L_90~270(75)av	1445
L_90~270(85)av	4745
L_45(65)av	925
L_45(75)av	1450
L_45(85)av	4912

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

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:

```

```

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:

```