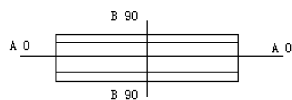
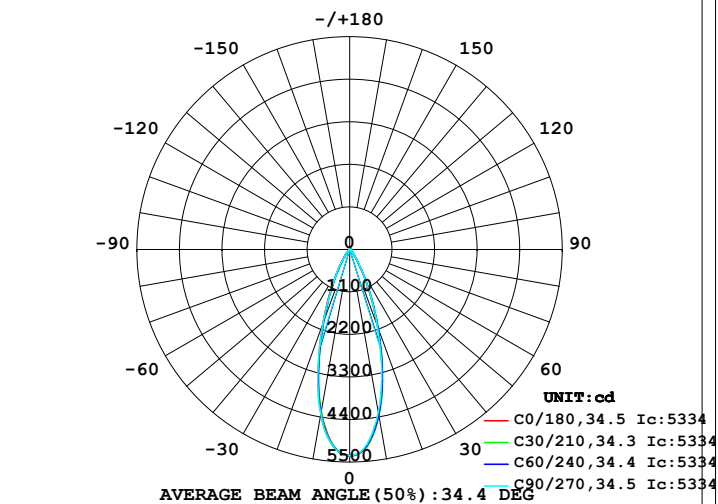


LUMINAIRE PHOTOMETRIC TEST REPORT

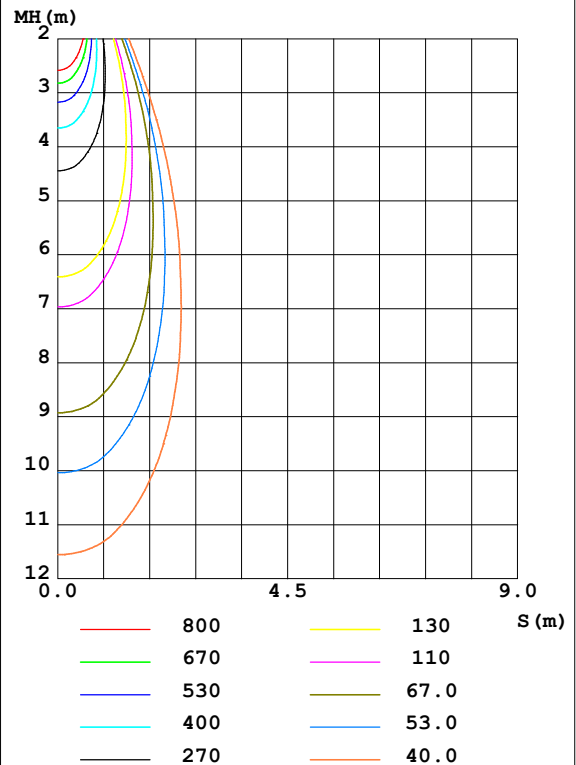
Test:U:225.1V I:0.1270A P:27.20W PF:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 79.85 lm/W			
MODEL	3000K CRI90	I _{max} (cd)	5334	S/MH (C0/180)	0.56
NOMINAL POWER(W)	27	LOR(%)	100.0	S/MH (C90/270)	0.57
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	2171.9	η UP,DN(C0-180)	0.0,50.7
NOMINAL FLUX(lm)	2171.91	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	225.1	η down (%)	100.0	CIBSE SHR MAX	0.60

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:2019-11-08

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	4342	4382	4272	4249	4262	4258	4326	4306	0- 10	460.0	460.0	21.2, 21.2
20	2113	2161	2103	2083	2022	1916	2012	2068	10- 20	868.6	1329	61.2, 61.2
30	616.8	630.4	614.9	611.6	572.5	564.8	597.3	589.7	20- 30	552.6	1881	86.6, 86.6
40	145.7	147.7	152.3	148.8	140.8	142.7	150.7	146.8	30- 40	190.1	2071	95.4, 95.4
50	43.51	44.24	43.87	43.94	42.42	41.29	42.87	42.16	40- 50	62.70	2134	98.3, 98.3
60	14.05	14.37	14.05	13.56	12.72	11.90	12.03	12.81	50- 60	23.23	2157	99.3, 99.3
70	6.597	6.498	6.717	6.679	6.395	6.166	6.108	6.363	60- 70	8.865	2166	99.7, 99.7
80	2.170	2.145	2.164	2.004	1.583	1.443	1.468	1.694	70- 80	4.279	2170	99.9, 99.9
90	1.814	1.819	1.863	1.871	1.177	1.178	1.182	1.174	80- 90	1.557	2172	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		

Conical surface Flux(90deg): 2110.7 lm

%lum = 97.2%

%lamp = 97.2%

Conical surface Flux(120deg): 2157.2 lm

%lum = 99.3%

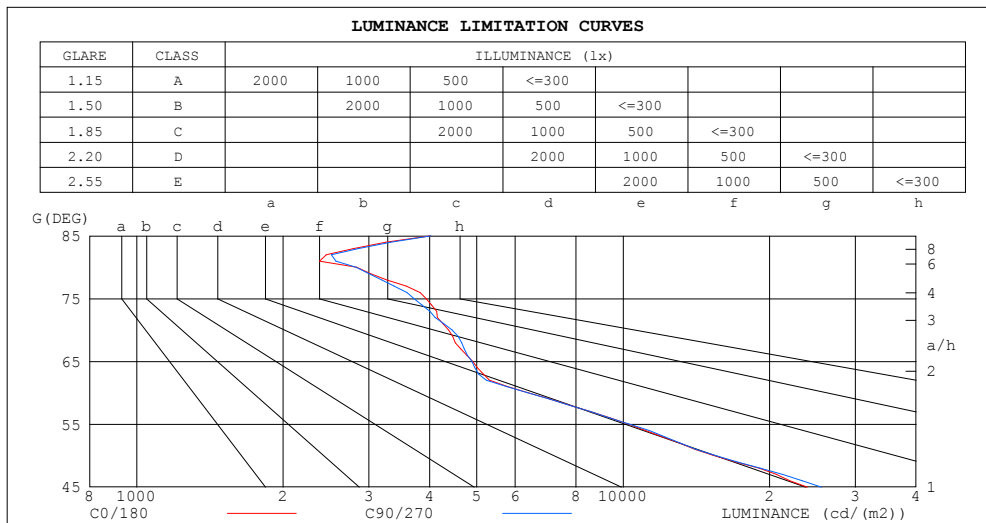
%lamp = 99.3%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: AE
 Test Date: 2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4015	4027
80	2833	2823
75	3936	3713
70	4372	4448
65	4901	4889
60	6370	6362
55	10246	10280
50	15343	15458
45	23917	25576

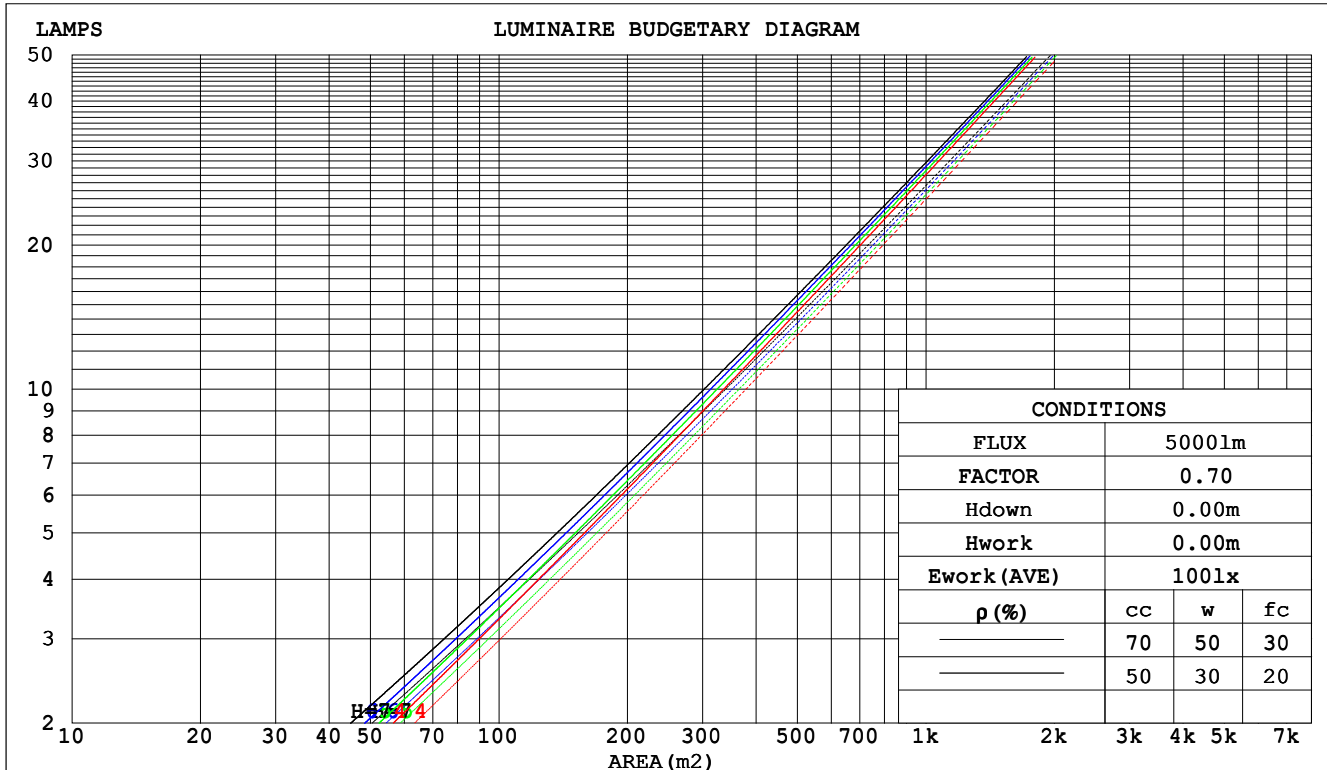
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	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	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.96	.98	.95	.94	.95	.93	.92	.90
3.0	.00	.95	.92	.98	.94	.91	.96	.92	.90	.93	.91	.88	.91	.89	.87	.86
4.0	.95	.90	.86	.93	.89	.86	.91	.88	.85	.89	.86	.84	.88	.85	.83	.81
5.0	.90	.85	.81	.89	.84	.81	.87	.83	.80	.86	.82	.80	.84	.81	.79	.78
6.0	.86	.81	.77	.85	.80	.77	.84	.79	.76	.82	.79	.76	.81	.78	.75	.74
7.0	.82	.77	.73	.81	.77	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.71
8.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.70	.67	.64	.70	.66	.64	.63



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm								
NAME: ALT70-27G30-F				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	.158	.090	.028	.151	.086	.027	.139	.080	.025	.127	.073	.024	.117	.068	.022	
2.0	.149	.081	.025	.143	.079	.024	.133	.074	.023	.123	.069	.022	.114	.065	.020	
3.0	.140	.075	.022	.135	.073	.022	.127	.069	.021	.119	.065	.020	.111	.061	.019	
4.0	.132	.069	.020	.128	.067	.020	.121	.064	.019	.114	.061	.018	.108	.058	.018	
5.0	.126	.064	.019	.122	.063	.018	.116	.060	.018	.110	.058	.017	.104	.056	.017	
6.0	.119	.060	.017	.116	.059	.017	.111	.057	.017	.106	.055	.016	.101	.053	.016	
7.0	.114	.056	.016	.111	.055	.016	.106	.054	.015	.102	.052	.015	.097	.051	.015	
8.0	.109	.053	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	.094	.048	.014	
9.0	.104	.050	.014	.102	.050	.014	.098	.049	.014	.095	.047	.014	.091	.046	.013	
10.0	.100	.048	.013	.098	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.120	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.102	.075	.055	.070	.052	.039	.041	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.095	.066	.046	.065	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.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:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm											
NAME: ALT70-27G30-F					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	14.1	14.9	14.3	15.0	15.2	14.2	15.0	14.4	15.1	15.3	
	3H	14.1	14.8	14.3	15.0	15.2	14.1	14.9	14.4	15.1	15.3
	4H	14.0	14.7	14.3	14.9	15.2	14.1	14.8	14.4	15.0	15.2
	6H	14.0	14.6	14.3	14.9	15.1	14.1	14.7	14.3	14.9	15.2
	8H	14.0	14.6	14.3	14.8	15.1	14.0	14.7	14.3	14.9	15.2
	12H	13.9	14.5	14.2	14.8	15.1	14.0	14.6	14.3	14.9	15.1
4H	2H	13.9	14.6	14.2	14.8	15.1	14.0	14.7	14.3	14.9	15.1
	3H	13.9	14.5	14.2	14.8	15.1	14.0	14.6	14.3	14.9	15.1
	4H	13.9	14.5	14.3	14.8	15.1	14.0	14.5	14.3	14.8	15.1
	6H	13.9	14.4	14.3	14.7	15.1	14.0	14.5	14.3	14.8	15.1
	8H	13.9	14.3	14.3	14.7	15.0	13.9	14.4	14.3	14.7	15.1
	12H	13.8	14.3	14.3	14.6	15.0	13.9	14.3	14.3	14.7	15.1
8H	4H	13.8	14.3	14.2	14.6	15.0	13.9	14.3	14.3	14.7	15.1
	6H	13.8	14.2	14.2	14.6	15.0	13.9	14.2	14.3	14.6	15.0
	8H	13.8	14.1	14.2	14.5	15.0	13.8	14.2	14.3	14.6	15.0
	12H	13.8	14.1	14.2	14.5	15.0	13.8	14.1	14.3	14.6	15.0
12H	4H	13.8	14.2	14.2	14.6	14.9	13.8	14.3	14.2	14.6	15.0
	6H	13.8	14.1	14.2	14.5	14.9	13.8	14.2	14.3	14.6	15.0
	8H	13.7	14.0	14.2	14.5	14.9	13.8	14.1	14.3	14.5	15.0
Variations with the observer position at spacings:											
S = 1.0H	+ 2.4 / - 4.2					+ 2.5 / - 4.4					
1.5H	+ 3.9 / - 3.2					+ 4.0 / - 3.3					
2.0H	+ 3.6 / - 3.2					+ 3.9 / - 3.3					

CIE Pub.117, 2172 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:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

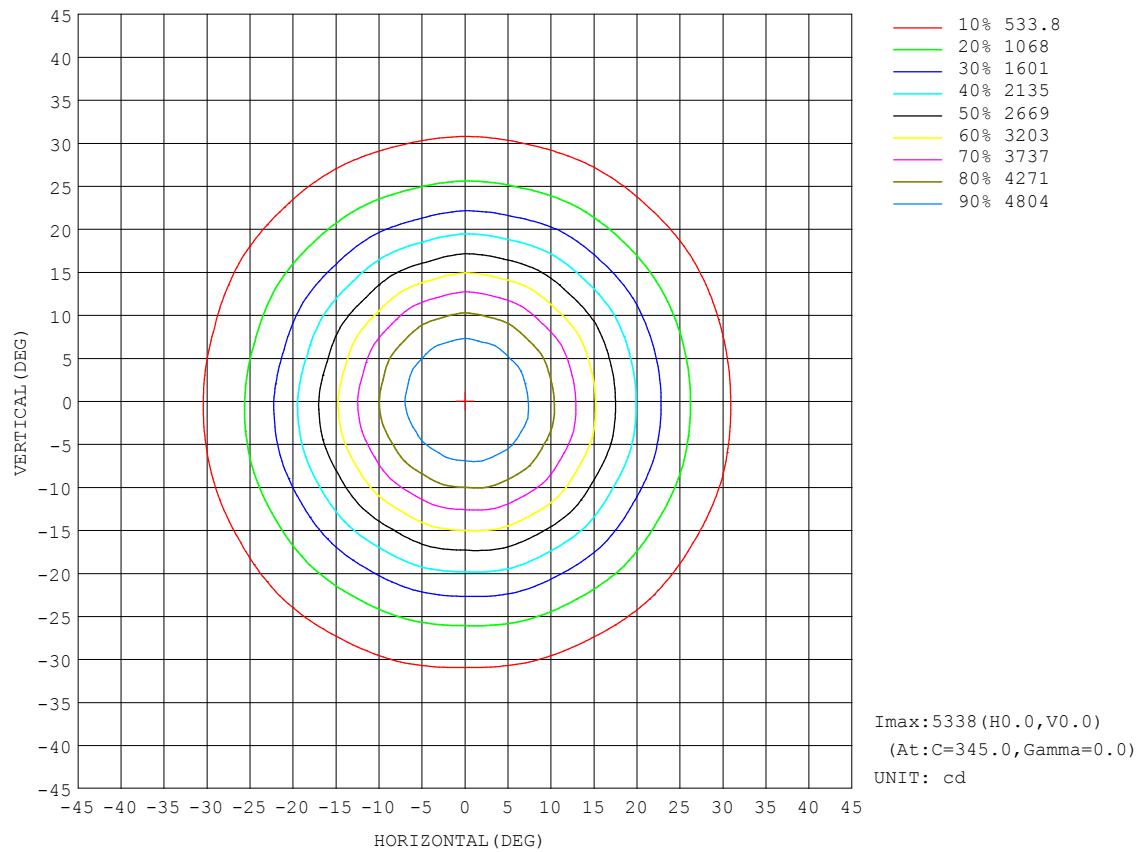
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	87	94	89	86	83
1.00	100	95	91	99	94	91	98	94	90	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

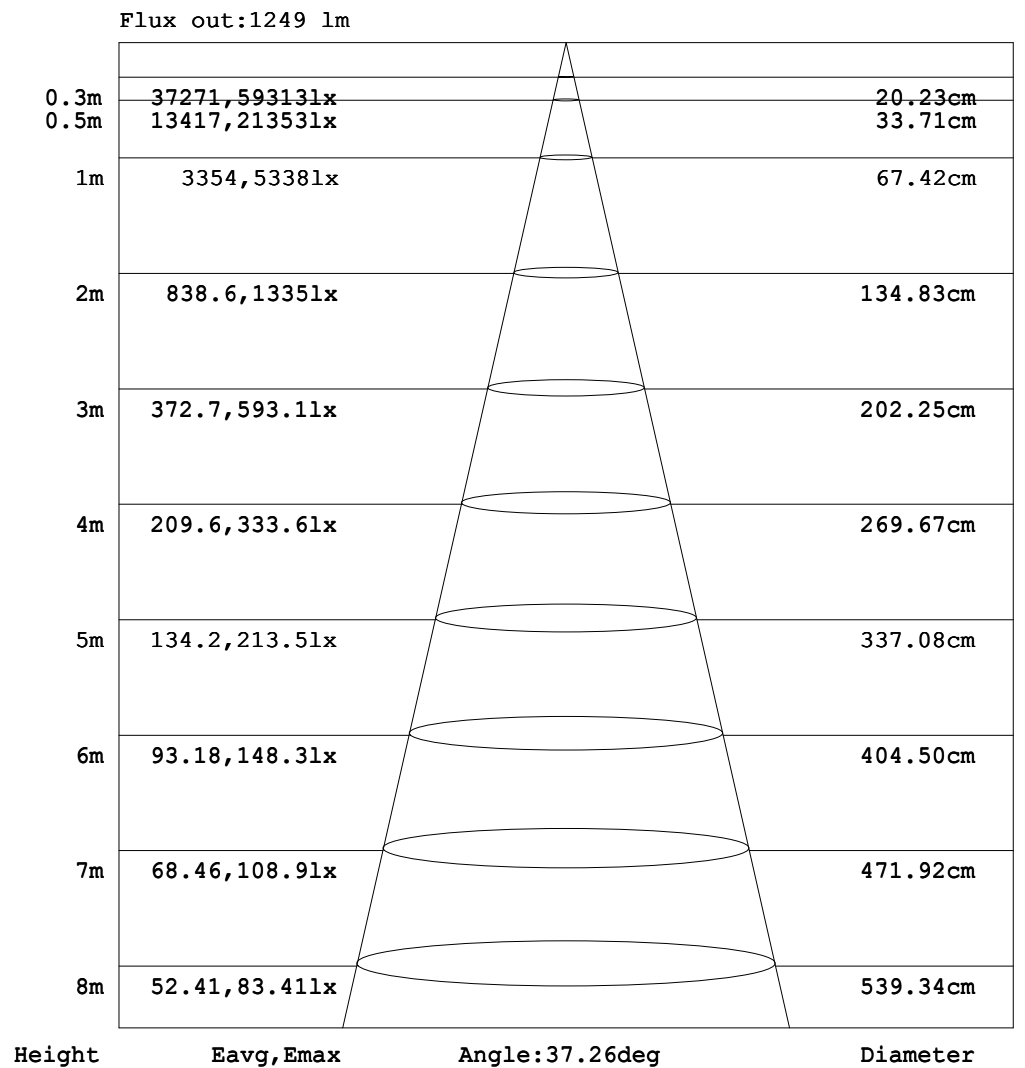


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



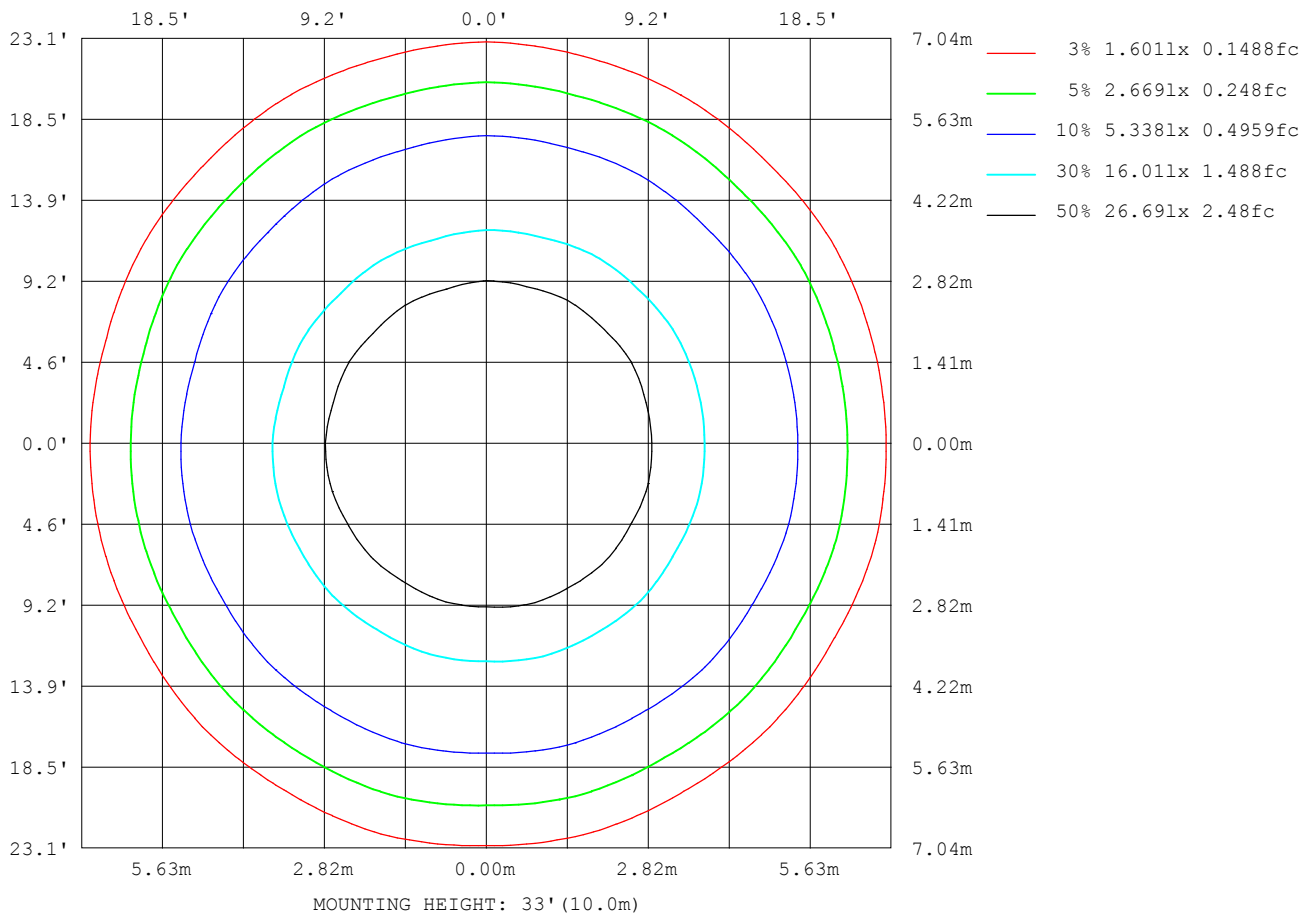
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	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:2019-11-08

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:0.9500 Freq:0Hz Lamp Flux:2171.91x1 lm		
NAME: ALT70-27G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

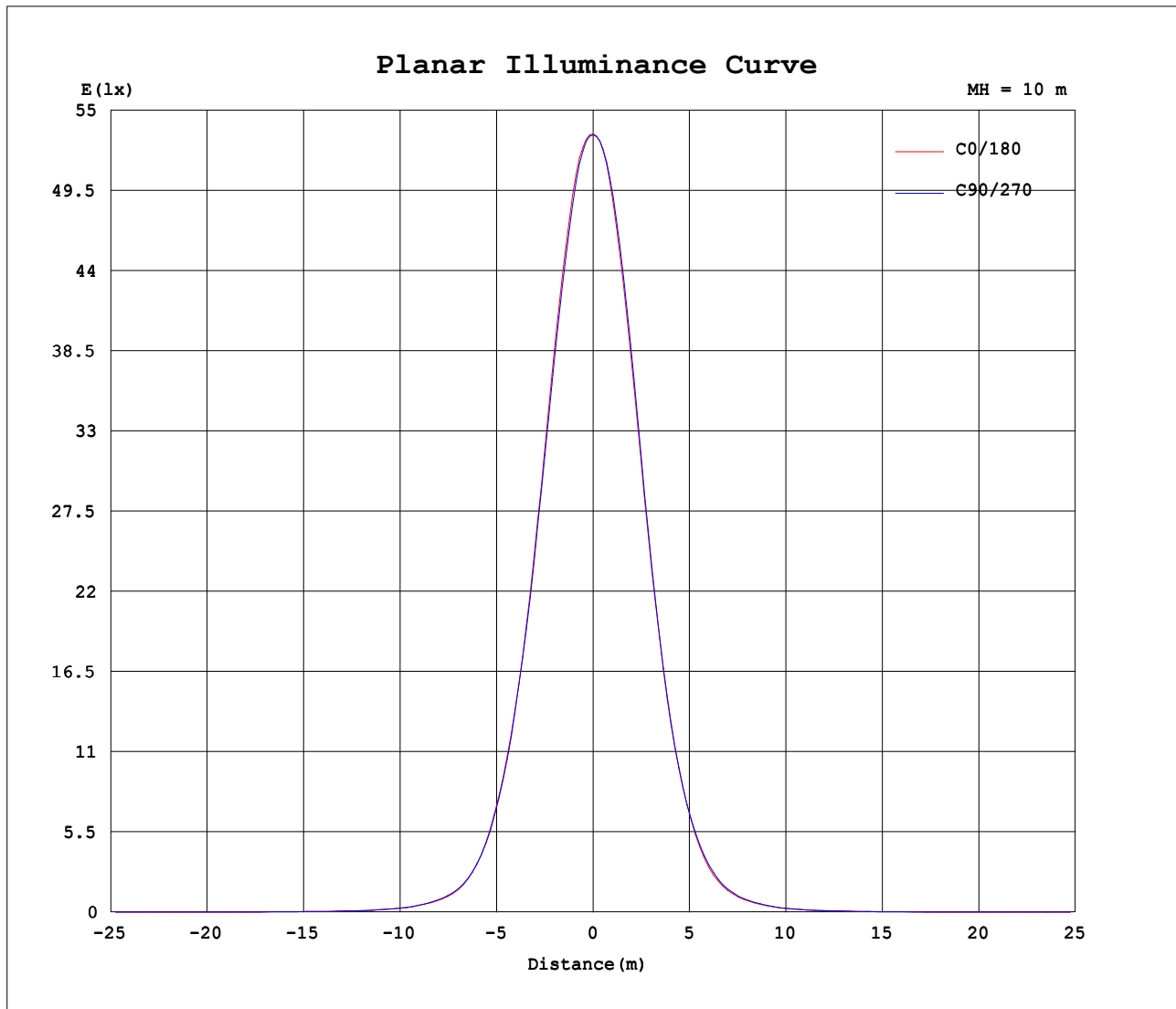
AvgL	cd/m2
L_0~180 (65) av	4767
L_0~180 (75) av	3661
L_0~180 (85) av	3521
L_90~270 (65) av	4636
L_90~270 (75) av	3485
L_90~270 (85) av	3526
L_45 (65) av	4695
L_45 (75) av	3531
L_45 (85) av	3552

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:AE
 Test Date:2019-11-08

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: 2019-11-08

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:

```