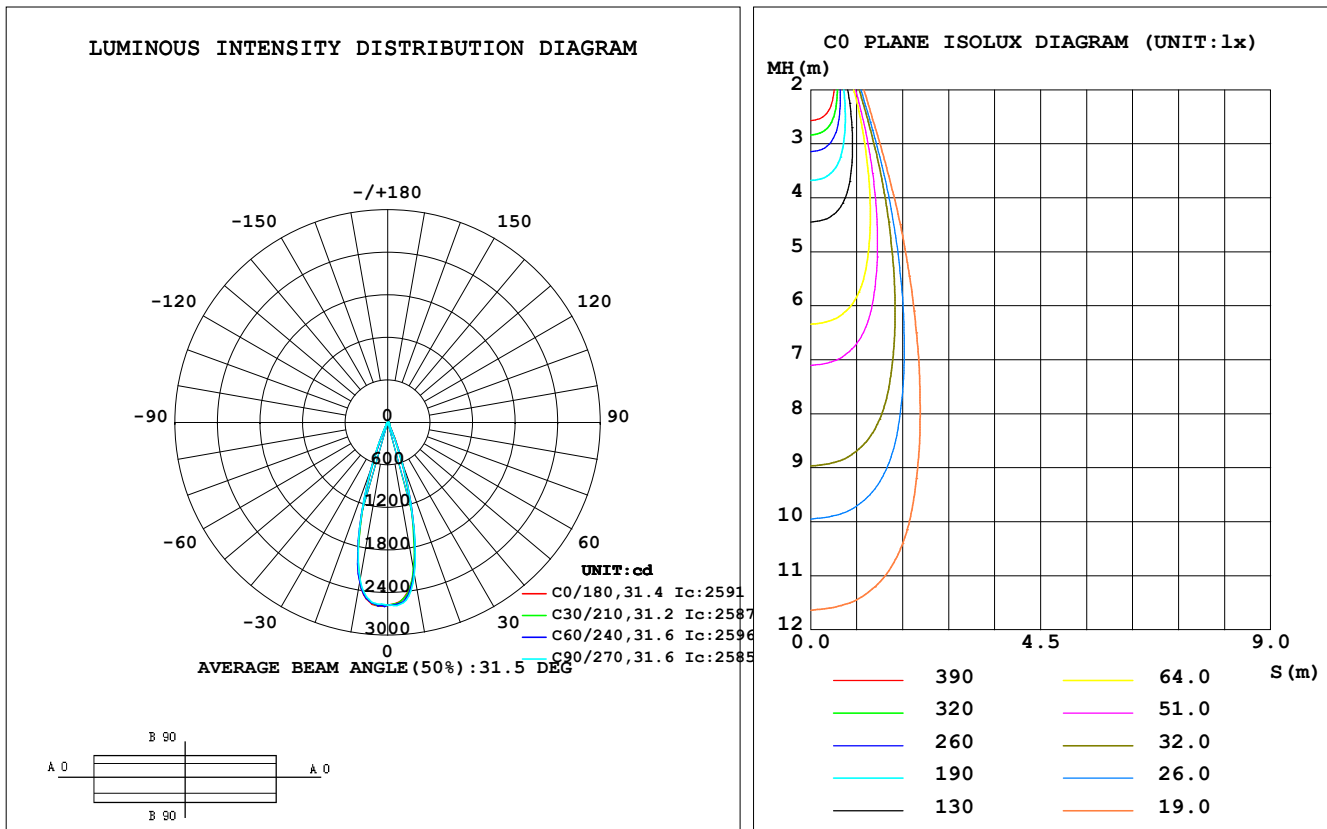


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm					
NAME: ALT45-11G30-F		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:38		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 67.88 lm/W
MODEL	3000K CRI90	I _{max} (cd)	2599	S/MH(C0/180)	0.49	
NOMINAL POWER(W)	11	LOR(%)	100.0	S/MH(C90/270)	0.50	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	746.71	η UP,DN(C0-180)	0.0,48.9	
NOMINAL FLUX(lm)	746.709	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.1	
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	



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	2130	2138	2174	2232	2277	2262	2251	2176	0- 10	232.5	232.5	31.1, 31.1
20	618.4	592.7	581.3	576.9	632.3	641.3	667.6	658.9	10- 20	378.0	610.5	81.8, 81.8
30	69.87	64.64	60.36	58.63	52.37	52.71	58.83	67.96	20- 30	98.23	708.7	94.9, 94.9
40	27.87	24.67	23.39	21.66	21.34	21.87	24.38	26.49	30- 40	24.22	733.0	98.2, 98.2
50	7.318	6.398	6.135	5.820	5.344	5.401	6.572	7.777	40- 50	10.77	743.7	99.6, 99.6
60	0.5939	0.5225	0.4714	0.5072	0.5976	0.6194	0.6817	0.7257	50- 60	2.612	746.3	100, 100
70	0.1137	0.0665	0.0744	0.0469	0.0704	0.1331	0.1172	0.1996	60- 70	0.2165	746.6	100, 100
80	0.0784	0.0900	0.0626	0.0744	0	0.0118	0	0.0392	70- 80	0.0737	746.6	100, 100
90	0.1802	0.1799	0.1877	0.2191	0	0	0	0	80- 90	0.0701	746.7	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): 739.81 lm

%lum = 99.1%

%lamp = 99.1%

Conical surface Flux(120deg): 746.35 lm

%lum = 100.0%

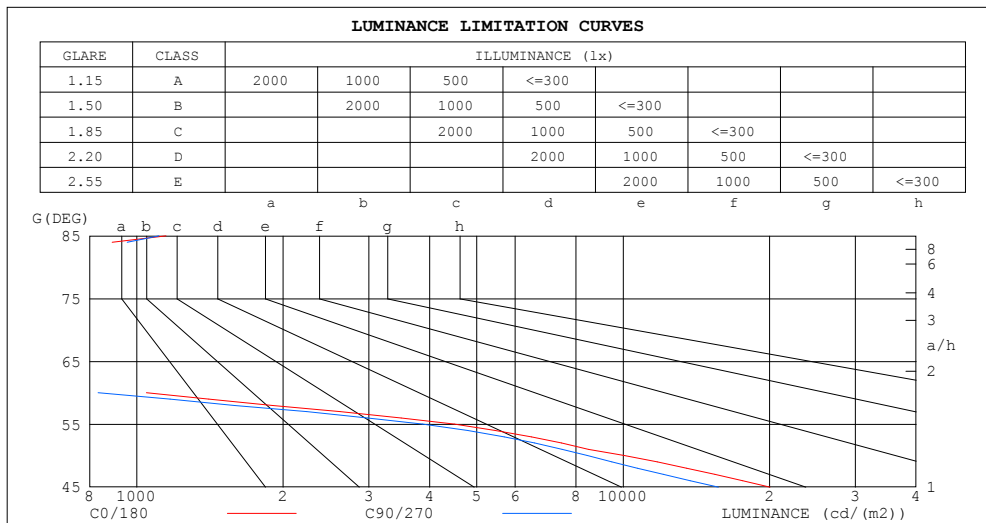
%lamp = 100.0%

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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1148	1110
80	398	318
75	280	214
70	293	192
65	344	262
60	1047	833
55	4498	3871
50	10035	8430
45	20040	15700

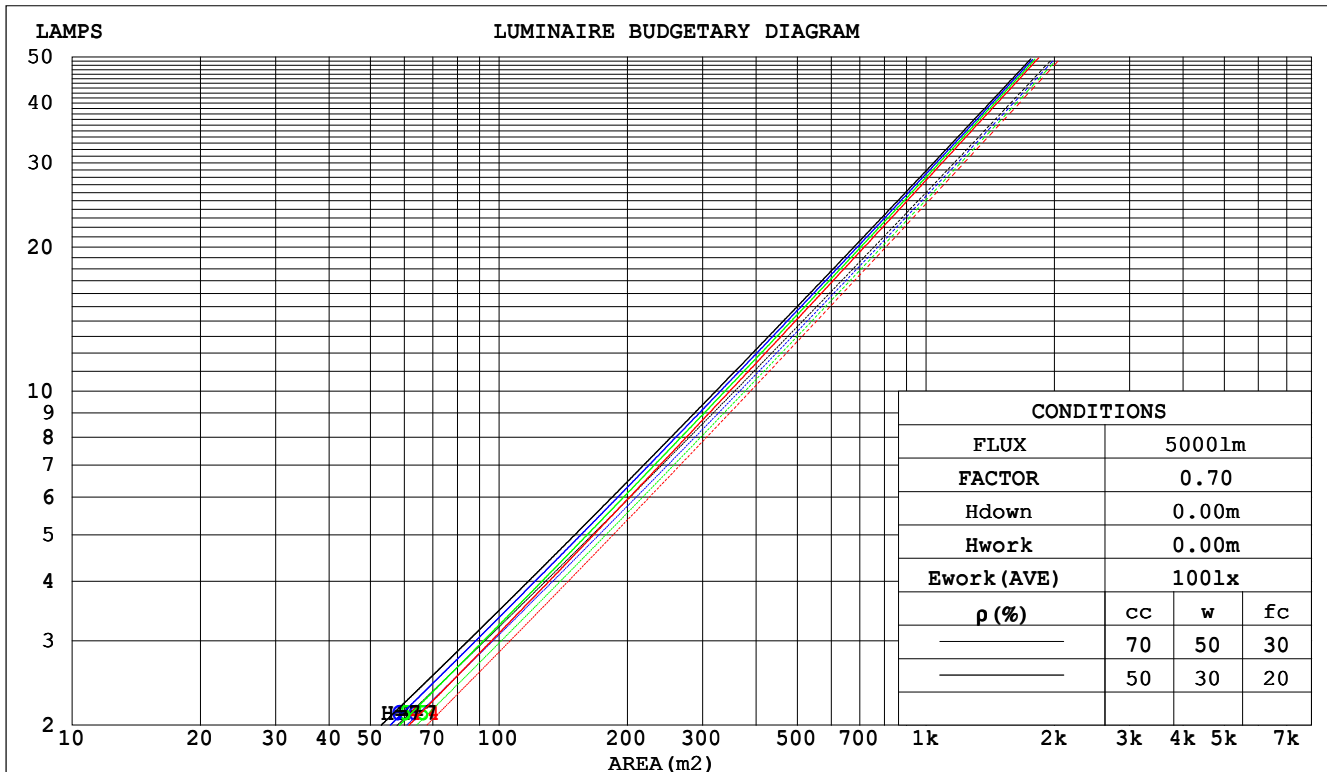
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	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	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.07	1.04	1.02	1.06	1.03	1.01	1.03	1.01	.99	.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.99	.96	1.02	.98	.95	.99	.96	.94	.97	.94	.93	.95	.93	.91	.90
4.0	.99	.95	.92	.98	.94	.91	.96	.93	.90	.94	.91	.89	.92	.90	.88	.87
5.0	.95	.91	.88	.94	.90	.87	.93	.89	.87	.91	.88	.86	.90	.87	.85	.84
6.0	.92	.87	.84	.91	.87	.84	.90	.86	.84	.88	.85	.83	.87	.85	.83	.81
7.0	.89	.84	.81	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.79
8.0	.86	.82	.79	.85	.81	.79	.84	.81	.78	.83	.80	.78	.83	.80	.78	.77
9.0	.83	.79	.76	.83	.79	.76	.82	.78	.76	.81	.78	.76	.80	.78	.75	.74
10.0	.81	.77	.74	.80	.76	.74	.80	.76	.74	.79	.76	.74	.78	.75	.73	.72



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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm					
NAME: ALT45-11G30-F			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:38		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	.138	.079	.025	.132	.075	.024	.119	.068	.022	.108	.062	.020	.097	.056	.018	
2.0	.128	.070	.022	.123	.068	.021	.113	.063	.019	.103	.058	.018	.094	.053	.017	
3.0	.120	.064	.019	.115	.062	.019	.107	.058	.018	.099	.054	.017	.091	.051	.016	
4.0	.112	.058	.017	.109	.057	.017	.101	.054	.016	.095	.051	.015	.088	.048	.015	
5.0	.106	.054	.016	.103	.053	.015	.097	.050	.015	.091	.048	.014	.086	.046	.014	
6.0	.100	.050	.014	.098	.049	.014	.092	.047	.014	.087	.045	.013	.083	.044	.013	
7.0	.095	.047	.013	.093	.046	.013	.088	.045	.013	.084	.043	.013	.080	.042	.012	
8.0	.091	.045	.013	.089	.044	.012	.085	.042	.012	.081	.041	.012	.078	.040	.012	
9.0	.087	.042	.012	.085	.042	.012	.082	.040	.011	.078	.039	.011	.075	.038	.011	
10.0	.084	.040	.011	.082	.040	.011	.079	.039	.011	.076	.038	.011	.073	.037	.011	

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	.168	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.096	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.123	.098	.079	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.066	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008	
6.0	.104	.076	.055	.089	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.096	.068	.047	.083	.059	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006	
8.0	.090	.061	.041	.077	.053	.036	.054	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.084	.055	.035	.073	.048	.031	.050	.034	.022	.029	.020	.013	.010	.007	.004	
10.0	.080	.050	.031	.069	.044	.027	.048	.031	.019	.028	.018	.012	.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 V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm										
NAME: ALT45-11G30-F					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:38			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	13.0	13.7	13.2	13.8	14.0	12.2	12.9	12.4	13.0	13.2
3H	12.9	13.5	13.1	13.7	13.8	12.0	12.7	12.3	12.8	13.0
4H	12.8	13.4	13.0	13.6	13.8	12.0	12.6	12.2	12.8	13.0
6H	12.7	13.2	13.0	13.5	13.7	11.9	12.4	12.2	12.7	12.9
8H	12.6	13.2	12.9	13.4	13.7	11.8	12.4	12.1	12.6	12.9
12H	12.6	13.1	12.9	13.4	13.6	11.8	12.3	12.1	12.6	12.8
4H 2H	12.8	13.4	13.0	13.6	13.8	12.0	12.6	12.2	12.8	13.0
3H	12.6	13.1	12.9	13.4	13.7	11.8	12.3	12.1	12.6	12.9
4H	12.5	13.0	12.9	13.3	13.6	11.7	12.2	12.1	12.5	12.8
6H	12.4	12.8	12.8	13.2	13.5	11.6	12.0	12.0	12.4	12.7
8H	12.4	12.8	12.8	13.1	13.5	11.6	12.0	12.0	12.3	12.7
12H	12.3	12.7	12.7	13.0	13.4	11.5	11.9	11.9	12.3	12.6
8H 4H	12.4	12.8	12.8	13.1	13.5	11.6	12.0	12.0	12.3	12.7
6H	12.3	12.6	12.7	13.0	13.4	11.5	11.8	11.9	12.2	12.6
8H	12.2	12.5	12.6	12.9	13.3	11.4	11.7	11.8	12.1	12.5
12H	12.2	12.4	12.6	12.8	13.3	11.4	11.6	11.8	12.1	12.5
12H 4H	12.3	12.7	12.7	13.0	13.4	11.5	11.9	11.9	12.2	12.6
6H	12.2	12.5	12.6	12.9	13.3	11.4	11.7	11.8	12.1	12.5
8H	12.1	12.4	12.6	12.8	13.3	11.3	11.6	11.8	12.0	12.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.7 / -11.3					+ 2.5 / -11.7				
1.5H	+ 4.0 / - 7.5					+ 3.9 / - 7.1				
2.0H	+ 6.5 / -14.5					+ 5.9 / -13.6				

CIE Pub.117, 746.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.0)

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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:

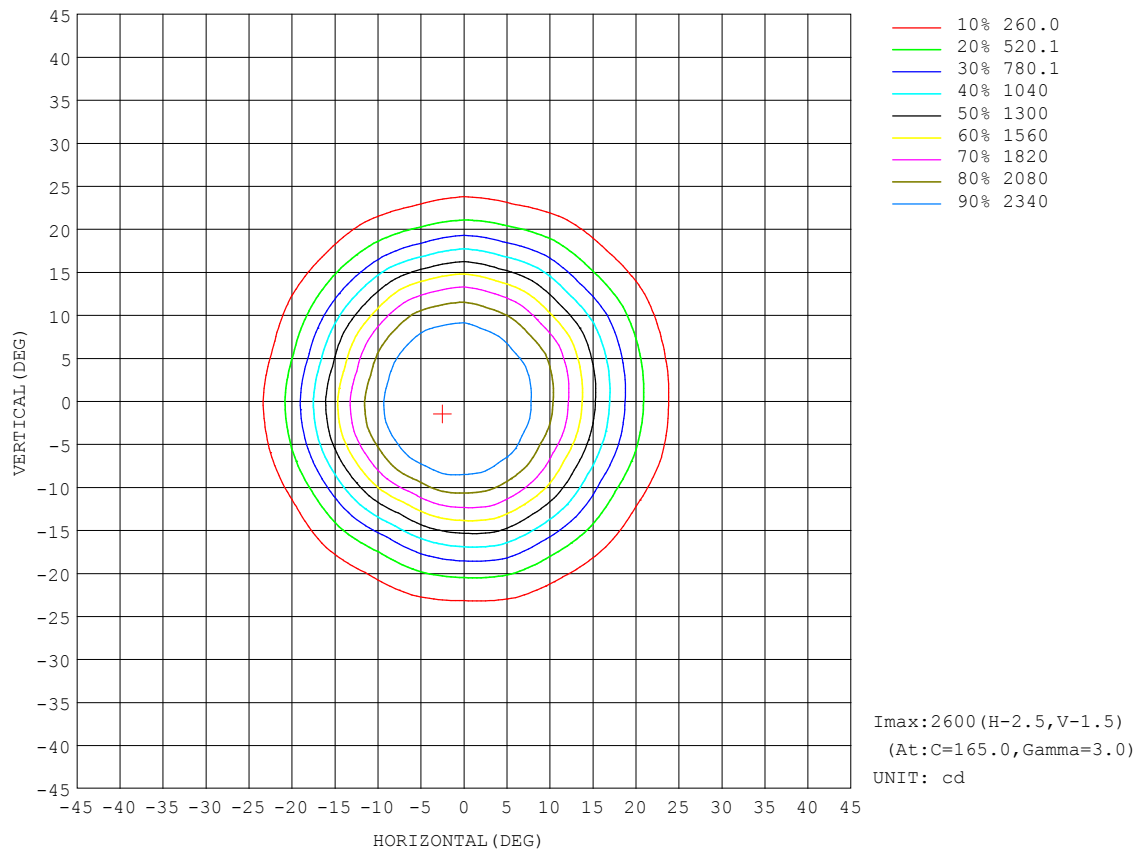
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	85	81	90	84	81	89	84	81	78
0.80	97	92	89	97	92	89	96	91	88	85
1.00	101	96	93	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 V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:

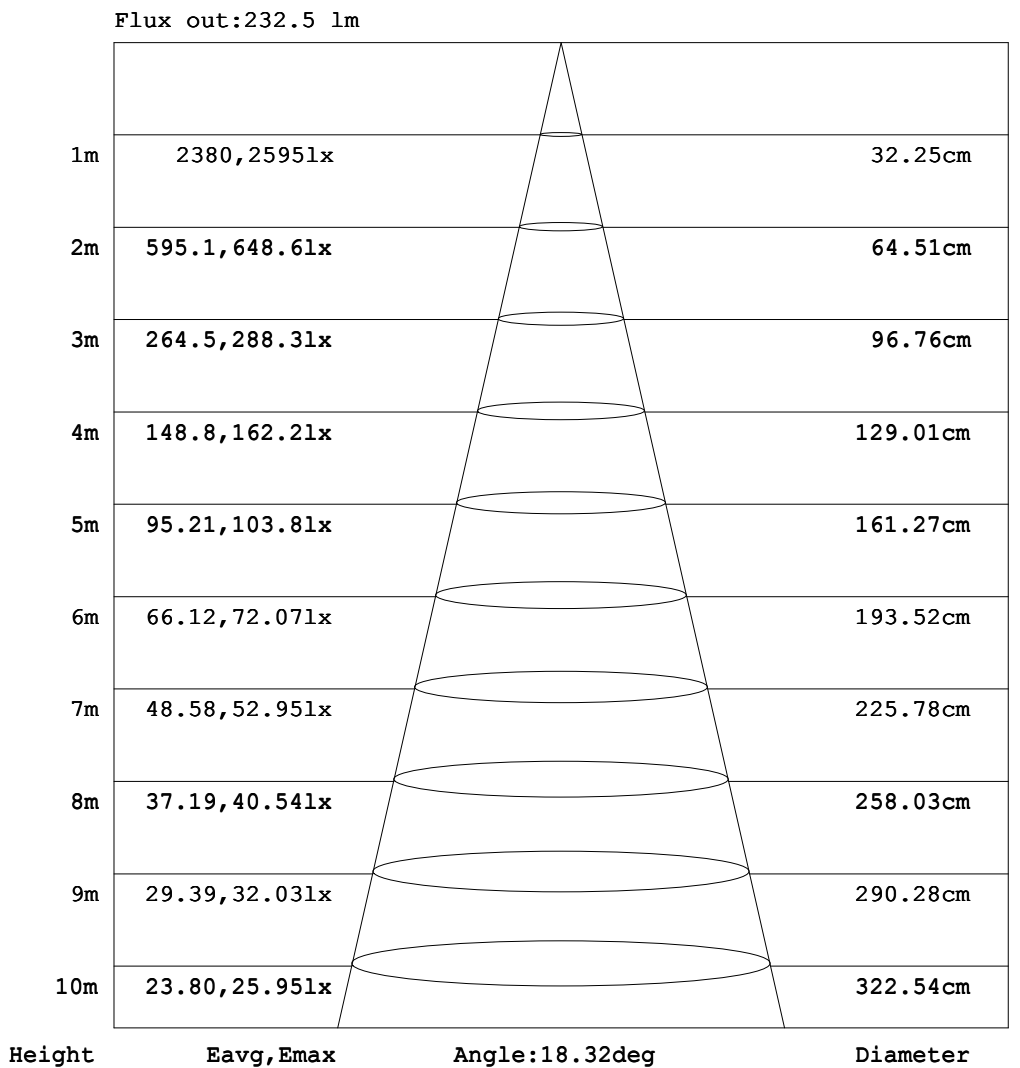


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:



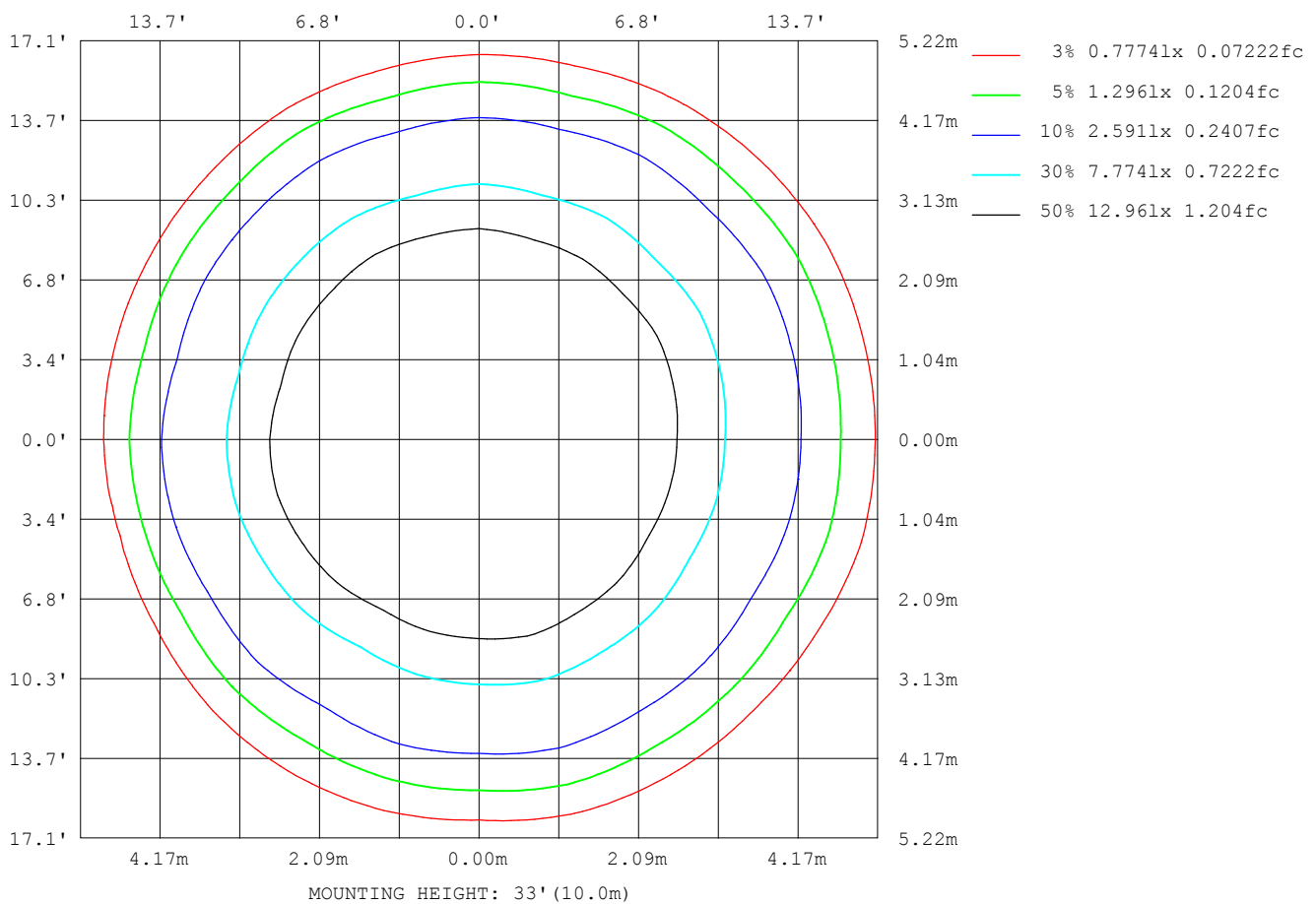
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	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:225.0V I:0.0540A P:11.00W PF:0.9080 Freq:0Hz Lamp Flux:746.709x1 lm		
NAME: ALT45-11G30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:38	Shielding Angle:

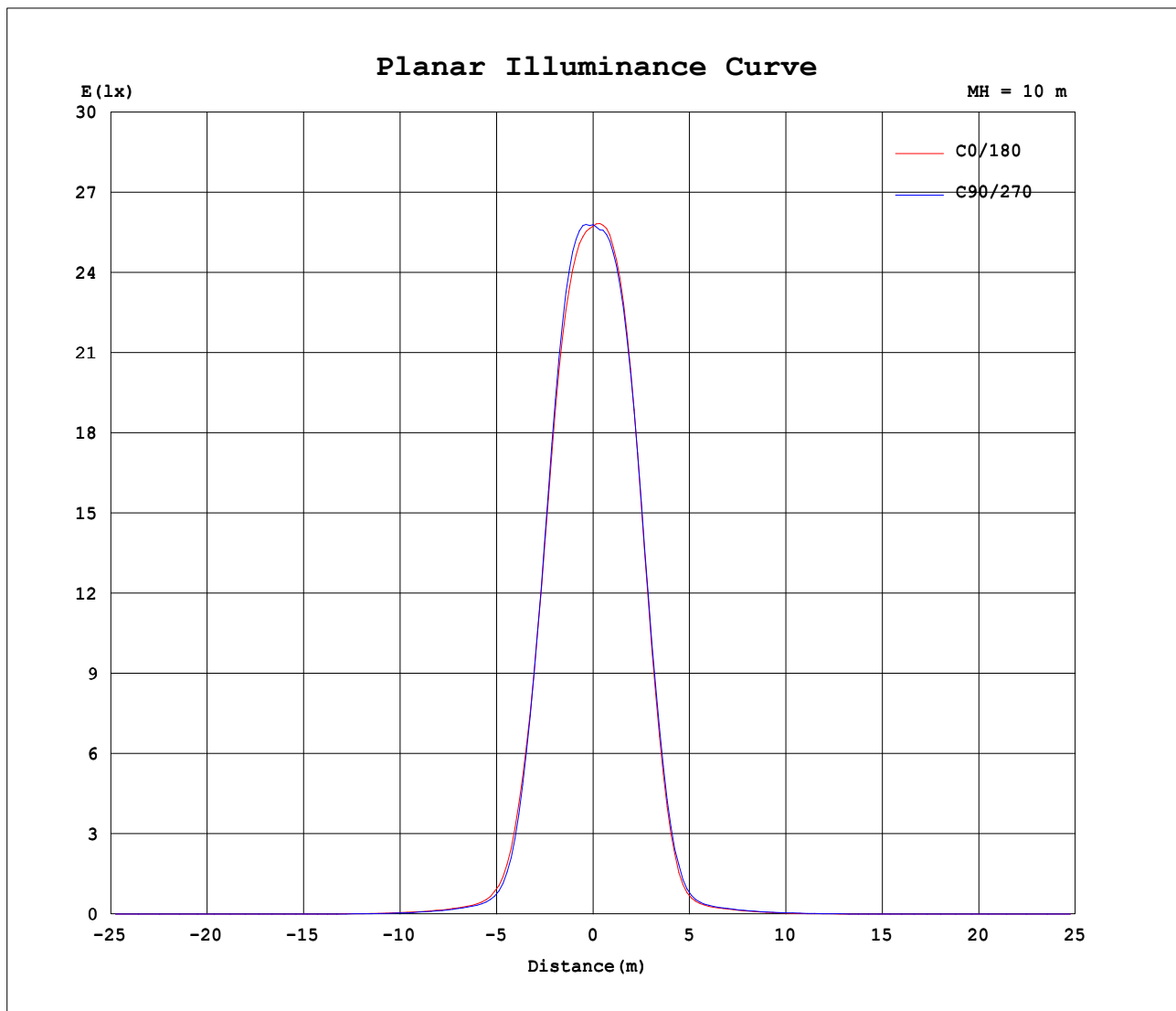
AvgL	cd/m2
L_0~180 (65) av	360
L_0~180 (75) av	213
L_0~180 (85) av	575
L_90~270 (65) av	331
L_90~270 (75) av	180
L_90~270 (85) av	555
L_45 (65) av	358
L_45 (75) av	267
L_45 (85) av	684

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:

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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:

```