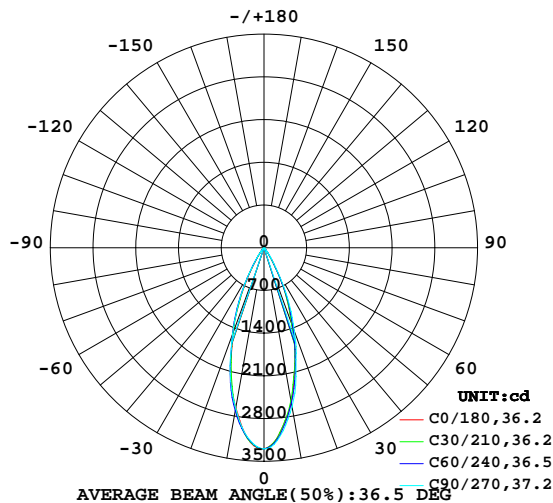


LUMINAIRE PHOTOMETRIC TEST REPORT

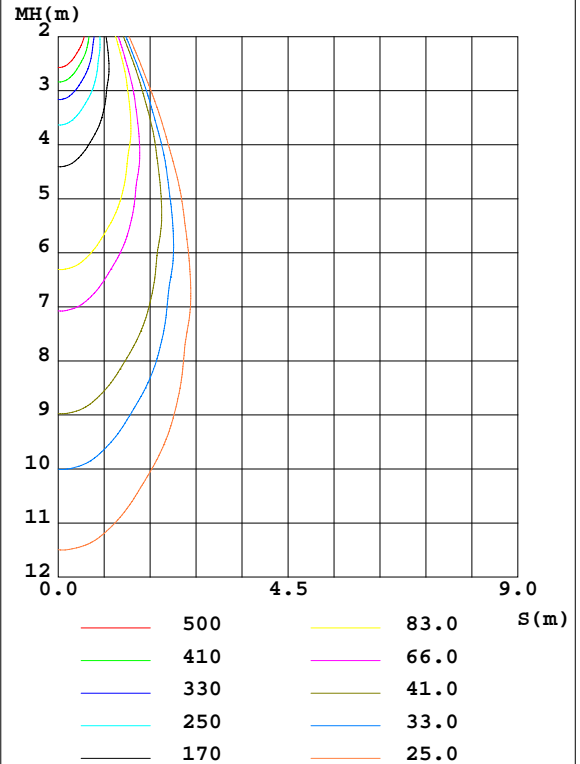
Test:U:225.1V I:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 51.08 lm/W
MODEL	ALT70-27G30-45	I _{max} (cd)	3301	S/MH(C0/180)	0.58	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.59	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1409.9	η UP,DN(C0-180)	0.0,51.2	
NOMINAL FLUX(lm)	1409.88	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.8	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225.1	η down(%)	100.0	CIBSE SHR MAX	0.65	

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:

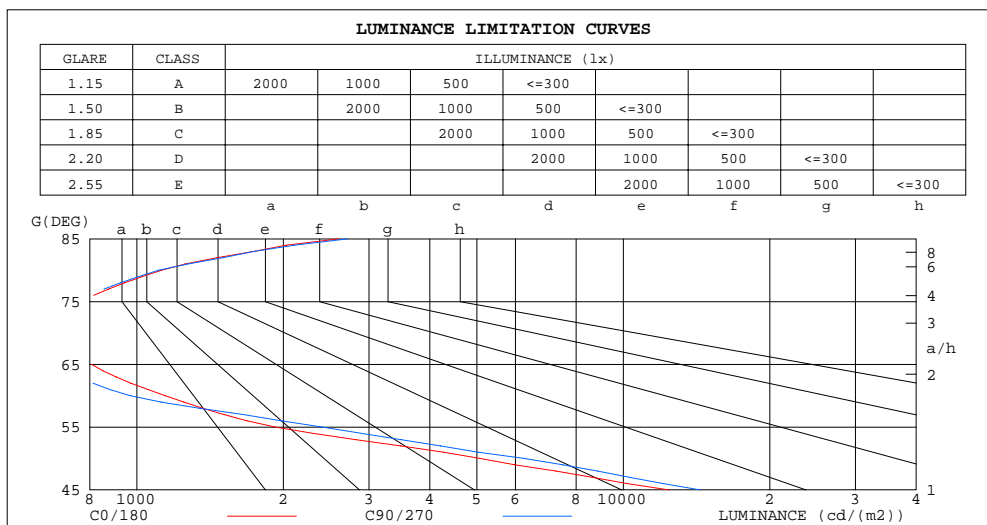
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	2659	2725	2672	2649	2567	2528	2648	2669	0- 10	280.6	280.6	19.9,19.9
20	1513	1491	1504	1494	1337	1316	1462	1478	10- 20	564.8	845.4	60,60
30	450.1	478.5	484.2	471.0	382.0	372.8	432.0	451.3	20- 30	415.4	1261	89.4,89.4
40	68.72	69.33	72.50	70.39	48.72	49.89	64.64	70.27	30- 40	121.5	1382	98,98
50	9.199	9.135	11.36	9.209	6.546	7.372	9.992	9.907	40- 50	22.01	1404	99.6,99.6
60	1.612	1.591	1.369	1.349	1.296	1.523	1.529	1.740	50- 60	3.467	1408	99.8,99.8
70	0.6415	0.6023	0.5875	0.5558	0.5897	0.6968	0.6183	0.7051	60- 70	0.9552	1409	99.9,99.9
80	0.5510	0.5713	0.5442	0.5913	0.4375	0.4696	0.4314	0.4699	70- 80	0.5725	1409	100,100
90	0.8206	0.8412	0.8691	0.8848	0.4846	0.4617	0.4816	0.4385	80- 90	0.6088	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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2603	2714
80	1124	1108
75	763	744
70	665	608
65	807	679
60	1142	968
55	1927	2404
50	5071	6250
45	12407	14395

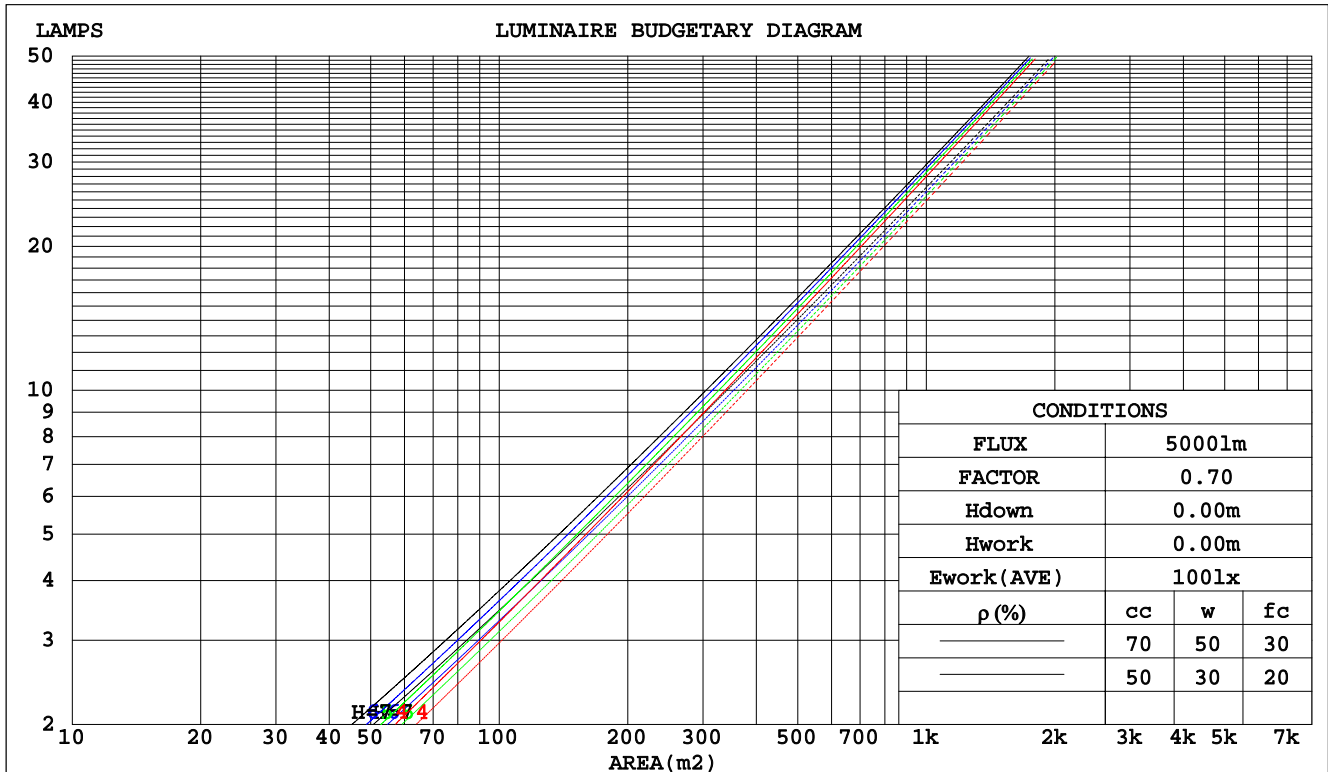
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 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	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.90	.94	.91	.89	.92	.90	.88	.86
4.0	.95	.90	.87	.94	.90	.86	.92	.88	.85	.90	.87	.84	.88	.86	.83	.82
5.0	.90	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.80	.85	.82	.80	.78
6.0	.86	.81	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.82	.78	.76	.75
7.0	.82	.77	.74	.82	.77	.74	.81	.76	.73	.80	.76	.73	.78	.75	.73	.71
8.0	.79	.74	.71	.78	.74	.70	.77	.73	.70	.76	.73	.70	.76	.72	.70	.68
9.0	.76	.71	.67	.75	.71	.67	.74	.70	.67	.74	.70	.67	.73	.69	.67	.66
10.0	.73	.68	.65	.72	.68	.65	.71	.67	.64	.71	.67	.64	.70	.67	.64	.63



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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 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	.155	.088	.028	.148	.084	.027	.136	.078	.025	.124	.072	.023	.114	.066	.021		
2.0	.146	.080	.024	.140	.077	.024	.130	.072	.022	.120	.067	.021	.111	.063	.020		
3.0	.137	.073	.022	.133	.071	.021	.124	.067	.020	.116	.063	.019	.108	.060	.019		
4.0	.130	.068	.020	.126	.066	.019	.119	.063	.019	.112	.060	.018	.105	.057	.017		
5.0	.124	.063	.018	.120	.062	.018	.114	.059	.017	.108	.057	.017	.102	.055	.016		
6.0	.118	.059	.017	.115	.058	.017	.109	.056	.016	.104	.054	.016	.099	.052	.015		
7.0	.112	.056	.016	.110	.055	.016	.105	.053	.015	.100	.051	.015	.096	.050	.015		
8.0	.108	.053	.015	.105	.052	.015	.101	.050	.014	.097	.049	.014	.093	.048	.014		
9.0	.103	.050	.014	.101	.049	.014	.097	.048	.014	.094	.047	.013	.090	.046	.013		
10.0	.099	.048	.013	.097	.047	.013	.094	.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	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011	
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.044	.035	.028	.014	.011	.009	
5.0	.118	.086	.063	.101	.075	.055	.070	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005	
8.0	.097	.062	.039	.083	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.034	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.045	.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: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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 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	14.3	15.1	14.5	15.3	15.4	15.4	16.2	15.6	16.3	16.5
	3H	14.2	14.9	14.4	15.1	15.3	15.2	16.0	15.5	16.2
	4H	14.1	14.8	14.4	15.0	15.2	15.2	15.9	15.4	16.1
	6H	14.0	14.7	14.3	14.9	15.1	15.1	15.7	15.4	16.0
	8H	14.0	14.6	14.3	14.8	15.1	15.0	15.7	15.3	15.9
	12H	13.9	14.5	14.2	14.8	15.1	15.0	15.6	15.3	15.9
4H	2H	14.1	14.8	14.4	15.0	15.2	15.2	15.8	15.4	16.1
	3H	13.9	14.5	14.2	14.8	15.0	15.0	15.6	15.3	15.9
	4H	13.8	14.4	14.2	14.7	15.0	14.9	15.4	15.2	15.7
	6H	13.7	14.2	14.1	14.5	14.9	14.8	15.3	15.2	15.6
	8H	13.7	14.1	14.1	14.5	14.9	14.8	15.2	15.2	15.6
	12H	13.7	14.1	14.1	14.4	14.8	14.7	15.1	15.1	15.5
8H	4H	13.7	14.1	14.1	14.5	14.8	14.8	15.2	15.1	15.5
	6H	13.6	14.0	14.0	14.3	14.8	14.7	15.0	15.1	15.4
	8H	13.5	13.9	14.0	14.3	14.7	14.6	14.9	15.1	15.4
	12H	13.5	13.8	14.0	14.2	14.7	14.6	14.9	15.0	15.3
12H	4H	13.6	14.0	14.0	14.4	14.8	14.7	15.1	15.1	15.5
	6H	13.5	13.9	14.0	14.3	14.7	14.6	14.9	15.0	15.3
	8H	13.5	13.8	14.0	14.2	14.7	14.6	14.8	15.0	15.3
Variations with the observer position at spacings:										
S = 1.0H	+ 3.6 / -11.6					+ 3.9 / -12.0				
1.5H	+ 6.0 / -10.9					+ 6.3 / -11.4				
2.0H	+ 6.5 / - 4.6					+ 6.5 / - 5.6				

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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

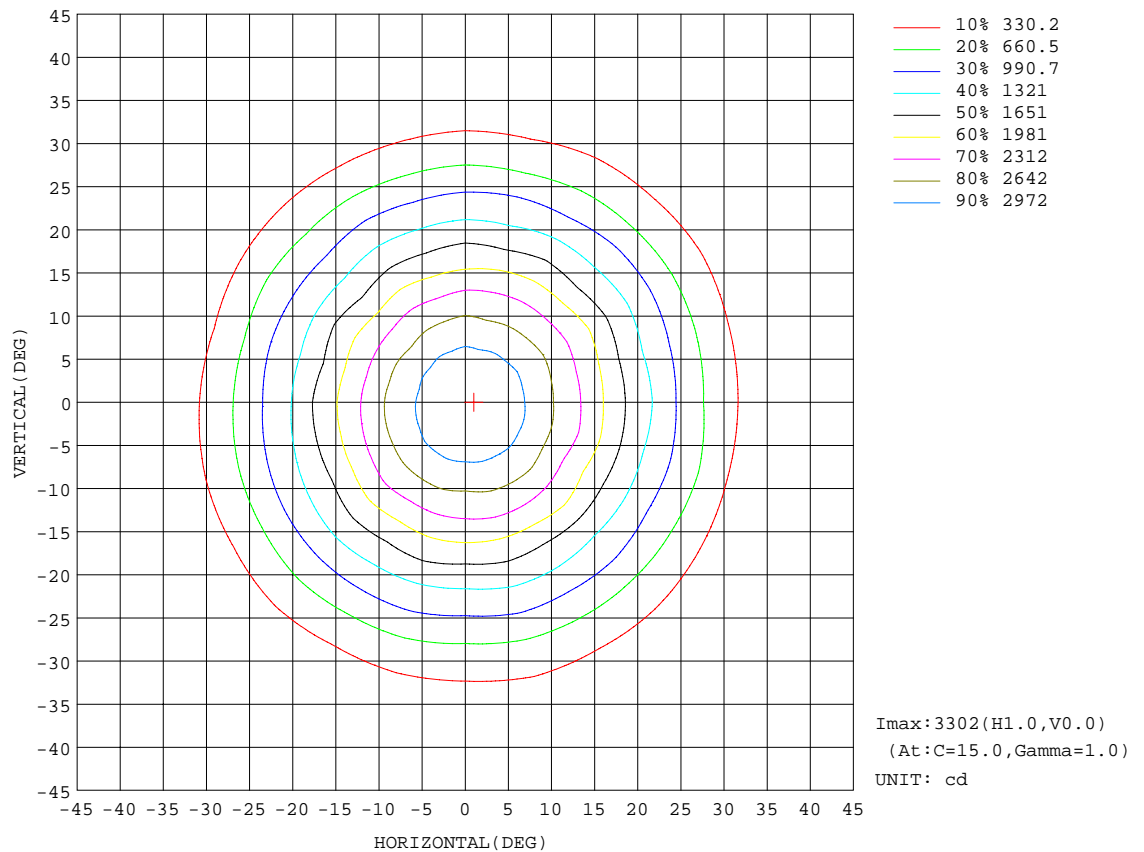
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	85	81	90	84	81	89	84	81	78
0.80	97	92	89	97	92	89	96	91	88	85
1.00	101	96	93	100	96	93	99	95	92	88
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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

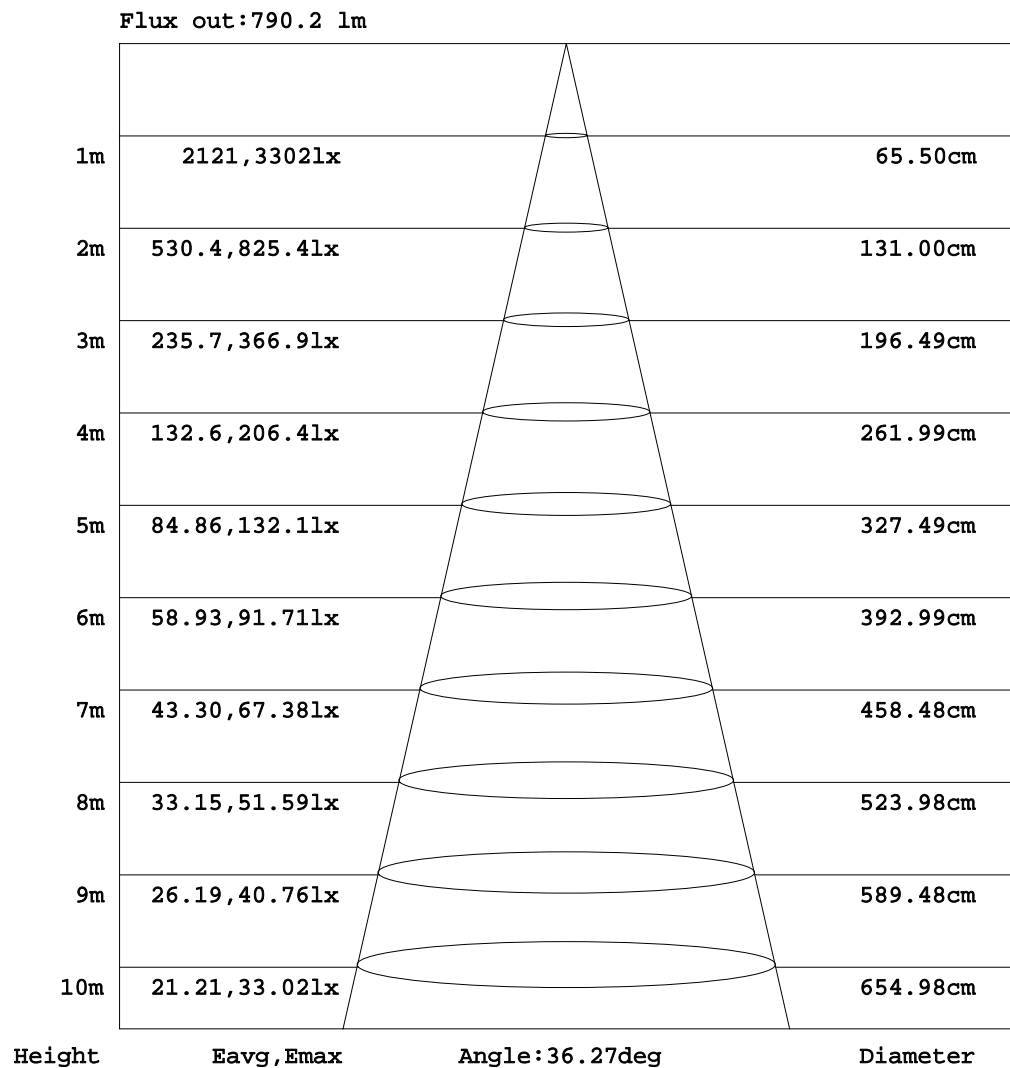


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-06-16

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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



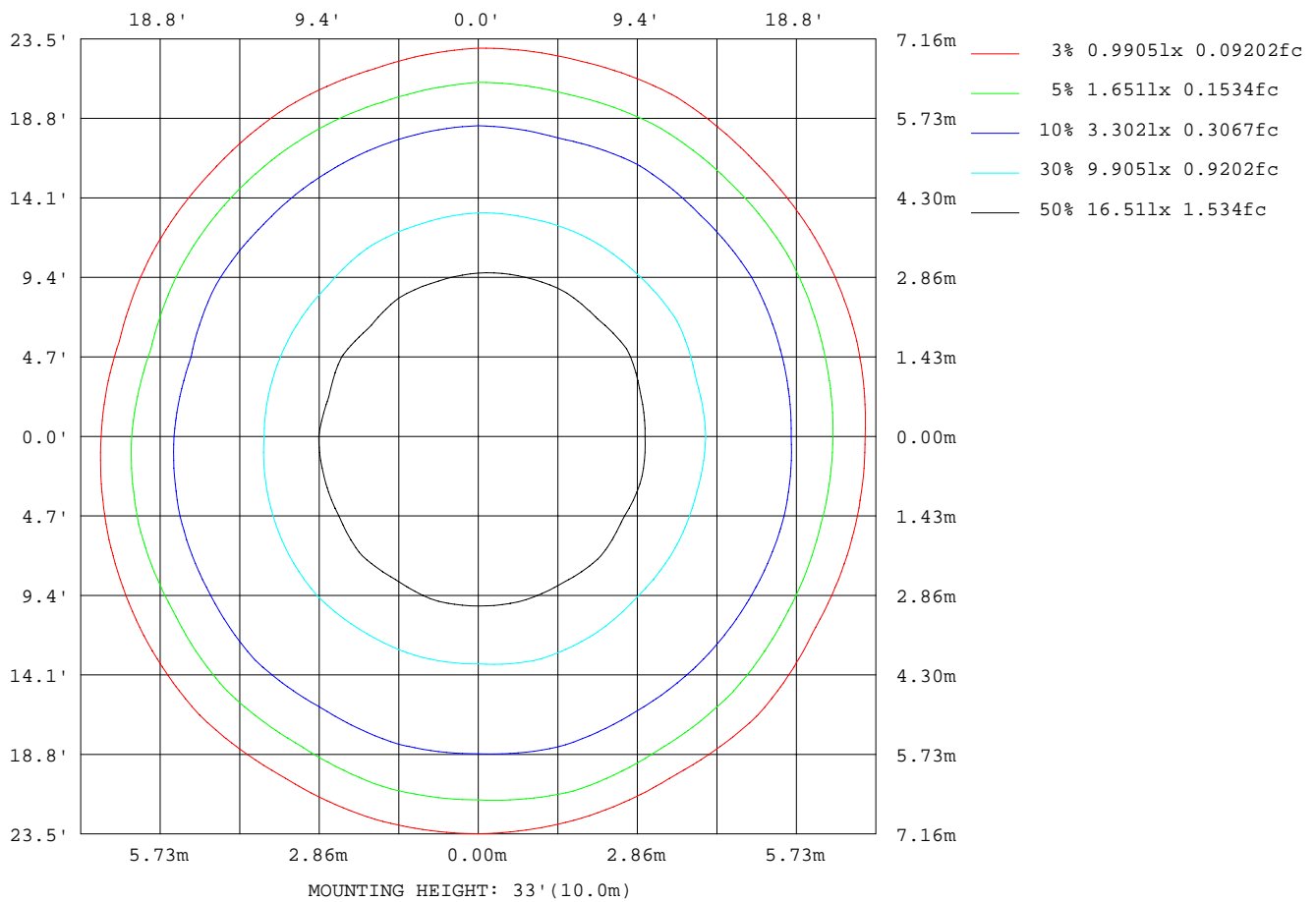
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 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:0.1290A P:27.60W PF:0.9510 Freq:50.00Hz Lamp Flux:1409.88x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

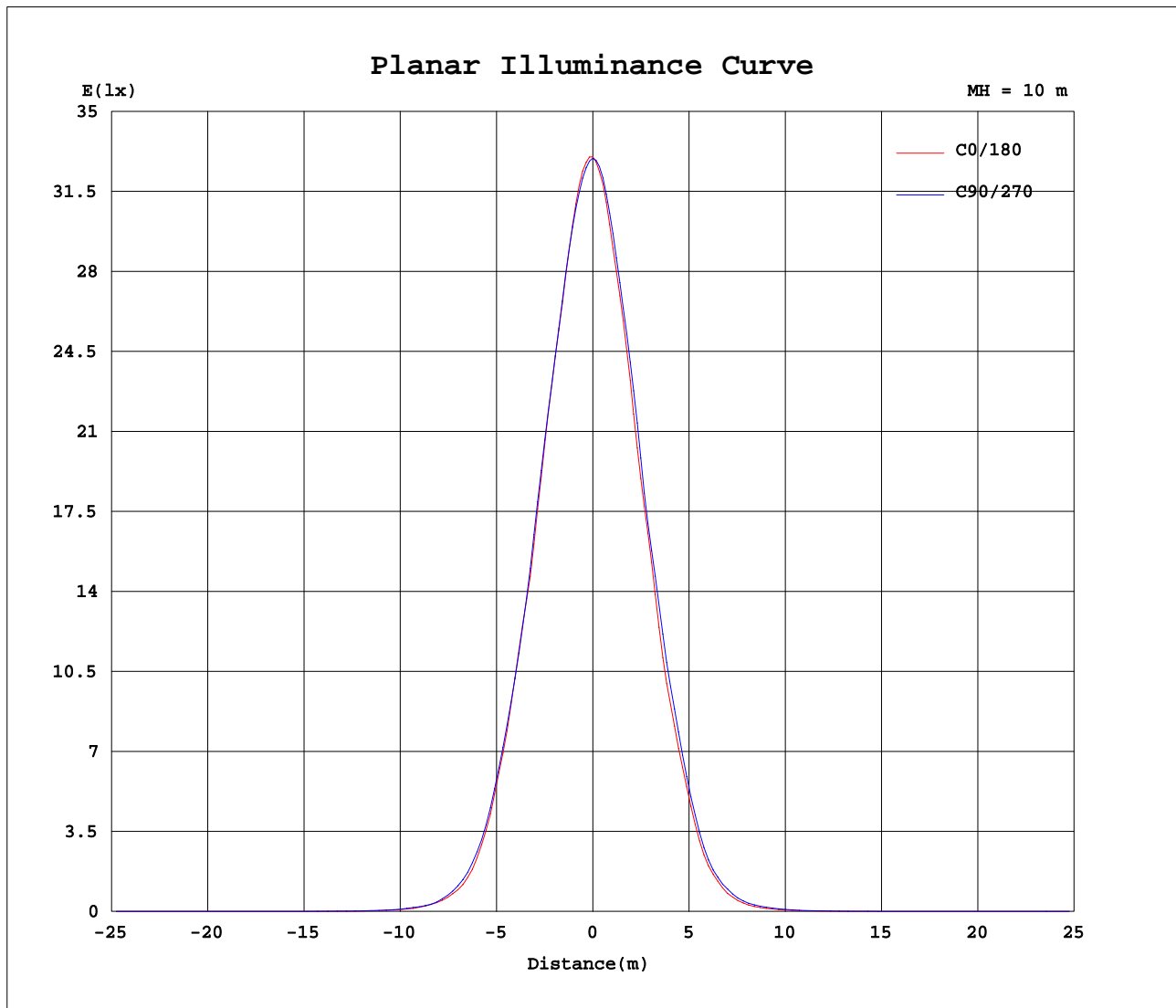
AvgL	cd/m2
L_0~180(65)av	753
L_0~180(75)av	715
L_0~180(85)av	2141
L_90~270(65)av	723
L_90~270(75)av	704
L_90~270(85)av	2209
L_45(65)av	790
L_45(75)av	737
L_45(85)av	2214

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:

```