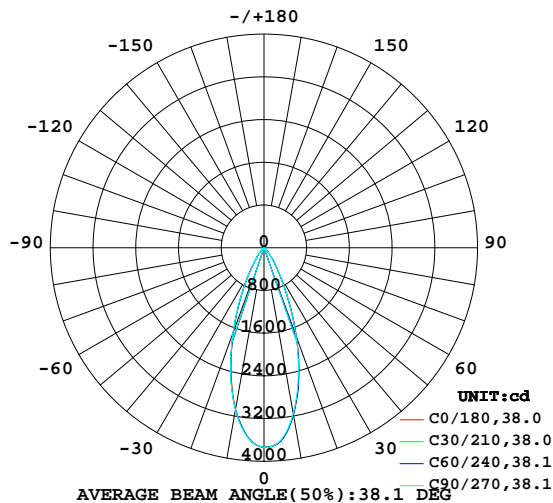


LUMINAIRE PHOTOMETRIC TEST REPORT

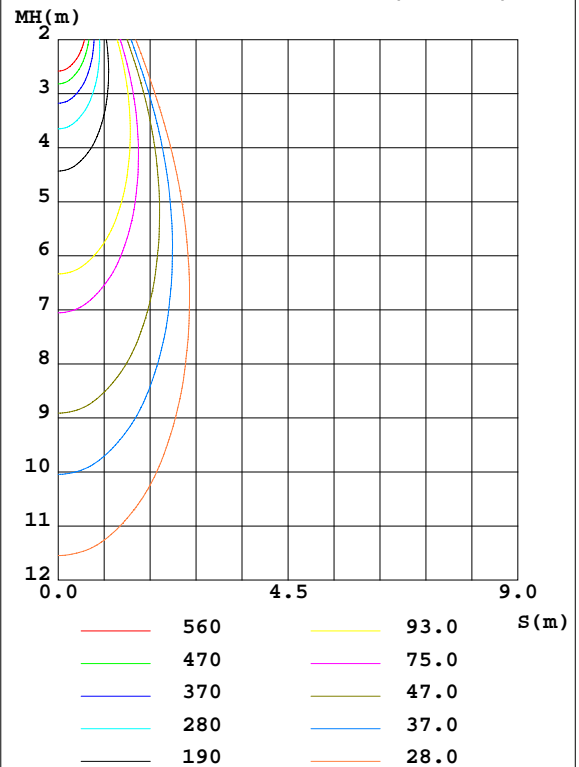
Test:U:225.1V I:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 76.09 lm/W
MODEL	ALR70-24G30-40	I _{max} (cd)	3738	S/MH(C0/180)	0.63	
NOMINAL POWER(W)	24	LOR(%)	93.8	S/MH(C90/270)	0.63	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1795.7	η UP,DN(C0-180)	0.0,46.6	
NOMINAL FLUX(lm)	1913.96	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.2	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	225.1	η down(%)	93.8	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 V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

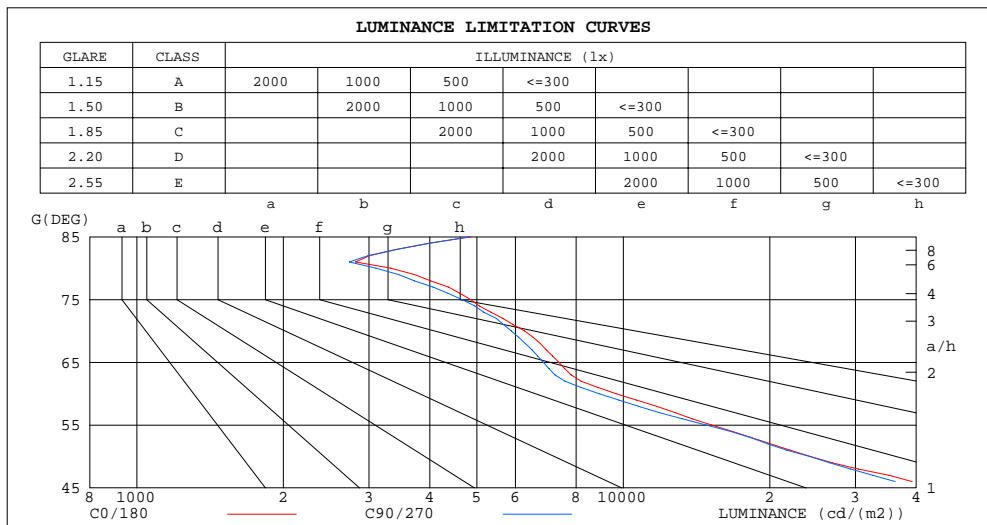
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	3072	3090	3082	3125	3168	3161	3155	3083	0- 10	327.2	327.2	18.2,17.1
20	1679	1710	1707	1766	1767	1743	1754	1679	10- 20	670.6	997.8	55.6,52.1
30	572.1	575.9	567.9	600.1	603.5	584.4	608.5	589.6	20- 30	492.7	1491	83,77.9
40	154.8	157.6	161.2	169.2	172.7	164.2	161.7	154.4	30- 40	201.3	1692	94.2,88.4
50	44.02	43.58	43.84	44.70	43.96	42.66	42.26	41.78	40- 50	67.64	1759	98,91.9
60	13.66	13.14	12.59	12.75	12.94	13.20	13.35	13.04	50- 60	22.83	1782	99.2,93.1
70	6.059	5.796	5.687	5.711	5.688	5.738	5.852	5.750	60- 70	8.576	1791	99.7,93.6
80	1.633	1.567	1.522	1.495	1.335	1.318	1.342	1.384	70- 80	3.705	1795	99.9,93.8
90	1.441	1.448	1.436	1.432	0.9201	0.9276	0.9275	0.9270	80- 90	1.204	1796	100,93.8
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 V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.1V I:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4861	4829
80	3325	3101
75	4853	4662
70	6265	5884
65	7368	6847
60	9662	8913
55	15191	14804
50	24219	24134
45	42374	40628

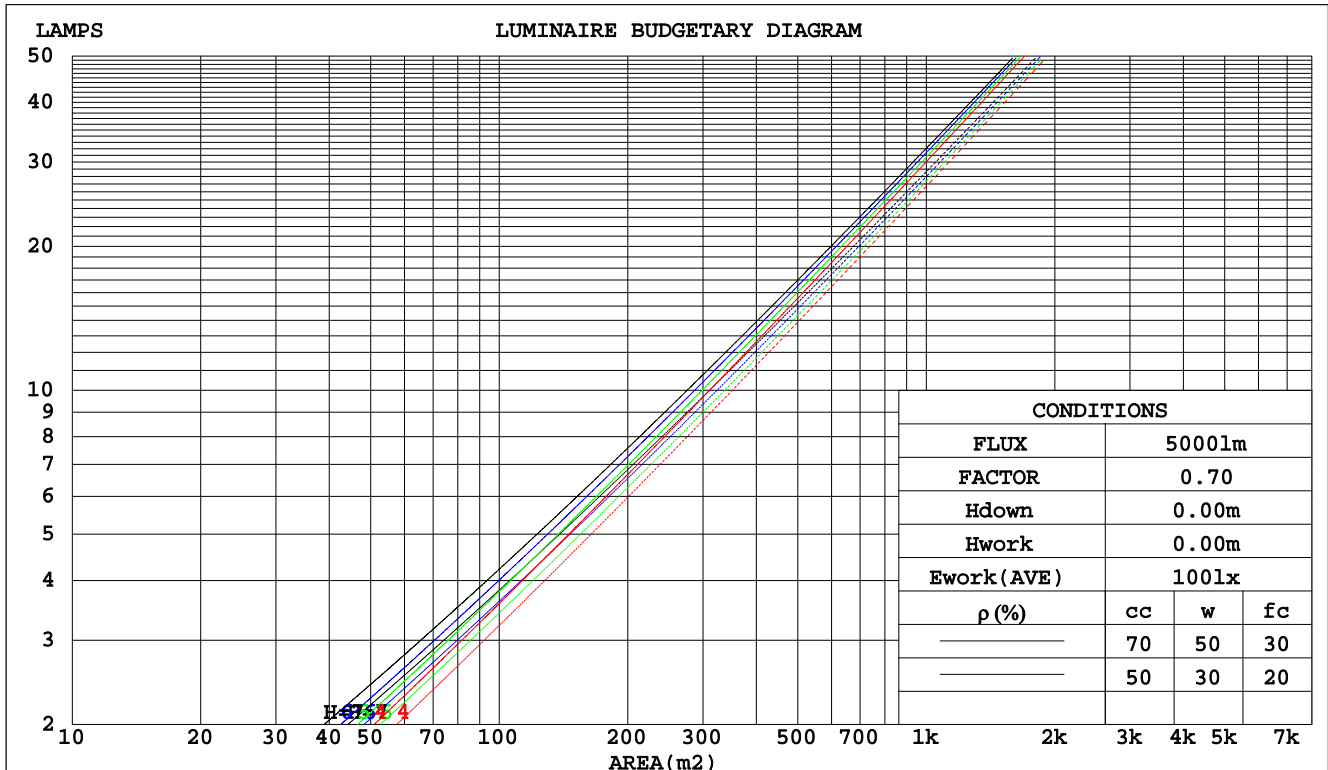
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	.00	.00	.00	.96	.96	.96	.94
1.0	1.05	1.02	1.01	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.92	.91	.90	.89
2.0	.98	.95	.92	.97	.94	.91	.94	.91	.89	.91	.89	.87	.88	.87	.85	.84
3.0	.93	.88	.85	.91	.87	.84	.89	.86	.83	.87	.84	.82	.85	.82	.81	.79
4.0	.87	.83	.79	.86	.82	.79	.84	.81	.78	.83	.80	.77	.81	.78	.76	.75
5.0	.83	.78	.74	.82	.78	.74	.80	.76	.73	.79	.76	.73	.78	.75	.72	.71
6.0	.79	.74	.70	.78	.73	.70	.77	.73	.70	.75	.72	.69	.74	.71	.69	.67
7.0	.75	.70	.66	.74	.70	.66	.73	.69	.66	.72	.68	.66	.71	.68	.65	.64
8.0	.71	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.63	.68	.65	.62	.61
9.0	.68	.63	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.66	.62	.59	.58
10.0	.65	.61	.57	.65	.60	.57	.64	.60	.57	.64	.60	.57	.63	.59	.57	.56



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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 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	.154	.087	.028	.147	.084	.027	.135	.078	.025	.125	.072	.023	.115	.067	.021		
2.0	.145	.080	.024	.140	.077	.024	.130	.072	.022	.121	.068	.021	.113	.064	.020		
3.0	.137	.073	.022	.133	.071	.021	.125	.068	.021	.117	.064	.020	.110	.061	.019		
4.0	.130	.068	.020	.126	.066	.020	.119	.063	.019	.113	.060	.018	.106	.058	.018		
5.0	.123	.063	.018	.120	.062	.018	.114	.059	.017	.108	.057	.017	.103	.055	.017		
6.0	.118	.059	.017	.115	.058	.017	.109	.056	.016	.104	.054	.016	.100	.052	.016		
7.0	.112	.055	.016	.110	.055	.016	.105	.053	.015	.100	.052	.015	.096	.050	.015		
8.0	.107	.052	.015	.105	.052	.015	.101	.050	.014	.097	.049	.014	.093	.048	.014		
9.0	.103	.050	.014	.101	.049	.014	.097	.048	.014	.093	.047	.013	.090	.046	.013		
10.0	.098	.047	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013	.087	.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	.179	.179	.179	.153	.153	.153	.104	.104	.104	.060	.060	.060	.019	.019	.019	
1.0	.160	.148	.137	.137	.127	.118	.093	.087	.081	.054	.050	.047	.017	.016	.015	
2.0	.144	.124	.108	.124	.107	.093	.085	.074	.065	.049	.043	.038	.016	.014	.012	
3.0	.132	.106	.086	.113	.092	.075	.078	.064	.052	.045	.037	.031	.014	.012	.010	
4.0	.122	.092	.070	.104	.080	.061	.072	.056	.043	.042	.033	.025	.013	.011	.008	
5.0	.113	.081	.058	.097	.070	.050	.067	.049	.036	.039	.029	.021	.012	.009	.007	
6.0	.105	.072	.049	.091	.063	.042	.062	.044	.030	.036	.026	.018	.012	.008	.006	
7.0	.099	.065	.041	.085	.056	.036	.059	.040	.026	.034	.023	.015	.011	.008	.005	
8.0	.093	.059	.035	.080	.051	.031	.056	.036	.022	.032	.021	.013	.010	.007	.004	
9.0	.088	.054	.031	.076	.047	.027	.053	.033	.019	.031	.019	.011	.010	.006	.004	
10.0	.084	.050	.027	.072	.043	.024	.050	.030	.017	.029	.018	.010	.010	.006	.003	

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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 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	16.7	17.6	16.9	17.7	17.9	16.7	17.6	17.0	17.7	17.9
3H	16.7	17.4	16.9	17.6	17.8	16.7	17.4	16.9	17.6	17.8
4H	16.6	17.4	16.9	17.6	17.8	16.6	17.4	16.9	17.6	17.8
6H	16.6	17.2	16.8	17.5	17.7	16.6	17.2	16.9	17.5	17.7
8H	16.5	17.2	16.8	17.4	17.7	16.5	17.2	16.8	17.4	17.7
12H	16.5	17.1	16.8	17.4	17.7	16.5	17.1	16.8	17.4	17.7
4H 2H	16.5	17.3	16.8	17.5	17.7	16.6	17.3	16.8	17.5	17.7
3H	16.5	17.2	16.8	17.4	17.7	16.5	17.2	16.8	17.4	17.7
4H	16.5	17.1	16.8	17.4	17.7	16.5	17.1	16.8	17.4	17.7
6H	16.4	16.9	16.8	17.3	17.6	16.4	16.9	16.8	17.3	17.6
8H	16.4	16.9	16.8	17.2	17.6	16.4	16.9	16.8	17.2	17.6
12H	16.4	16.8	16.8	17.2	17.5	16.4	16.8	16.8	17.2	17.5
8H 4H	16.4	16.8	16.8	17.2	17.6	16.4	16.8	16.8	17.2	17.6
6H	16.3	16.7	16.7	17.1	17.5	16.3	16.7	16.7	17.1	17.5
8H	16.3	16.6	16.7	17.0	17.5	16.3	16.6	16.7	17.0	17.5
12H	16.3	16.6	16.7	17.0	17.5	16.3	16.6	16.7	17.0	17.5
12H 4H	16.3	16.7	16.7	17.1	17.5	16.3	16.8	16.7	17.1	17.5
6H	16.3	16.6	16.7	17.0	17.5	16.3	16.6	16.7	17.0	17.5
8H	16.2	16.5	16.7	17.0	17.4	16.2	16.5	16.7	17.0	17.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / - 5.1					+ 2.6 / - 5.5				
1.5H	+ 4.1 / - 4.2					+ 4.2 / - 4.4				
2.0H	+ 4.5 / - 3.9					+ 4.4 / - 3.8				

CIE Pub.117, 1914 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.3$)

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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

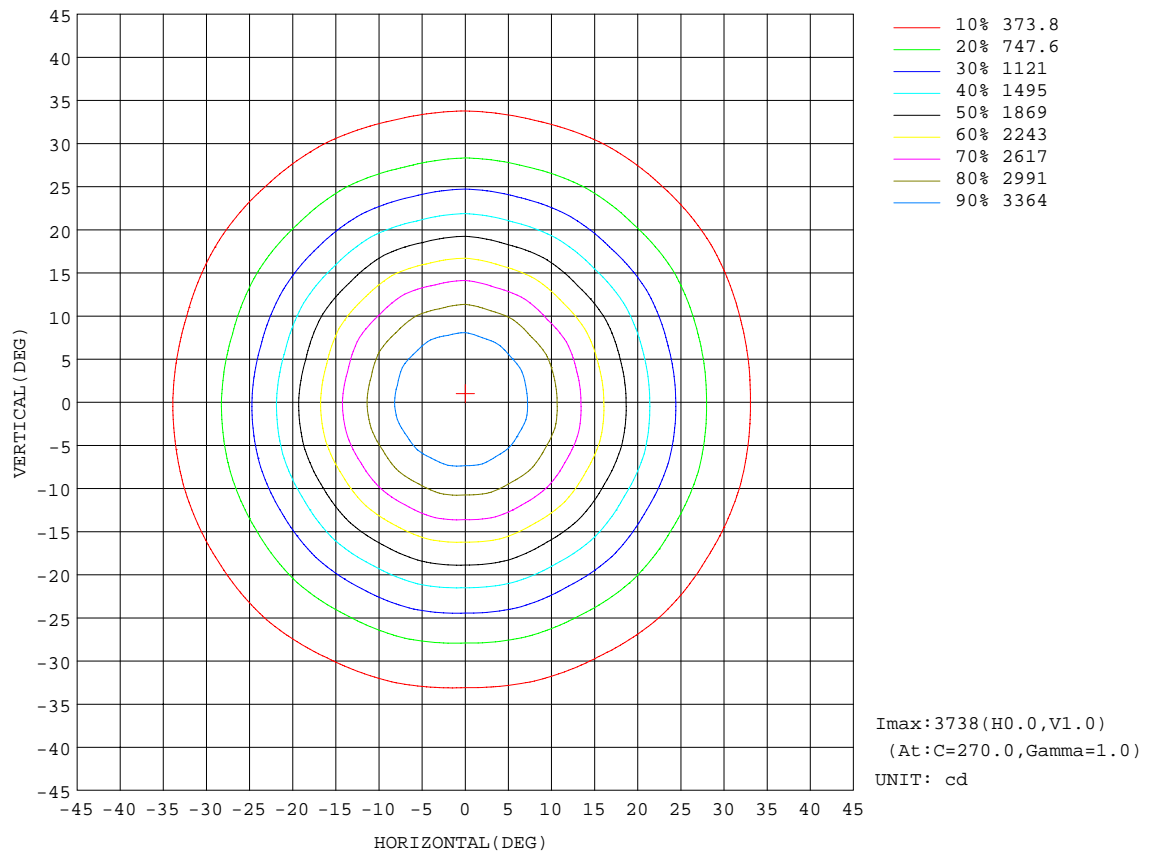
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	82	77	73	82	76	73	81	76	73	70
0.80	89	84	81	89	84	80	88	83	80	77
1.00	93	88	85	93	88	85	91	88	84	81
1.25	97	92	89	96	92	89	94	91	88	84
1.50	100	95	92	99	95	92	96	93	91	87
2.00	102	98	95	101	97	95	98	95	93	88
2.50	104	100	97	102	99	97	99	97	95	89
3.00	105	102	99	103	101	98	100	98	96	90
4.00	107	104	102	105	103	101	102	100	98	92
5.00	108	106	104	106	104	103	102	101	100	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHR _{NOM} = 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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



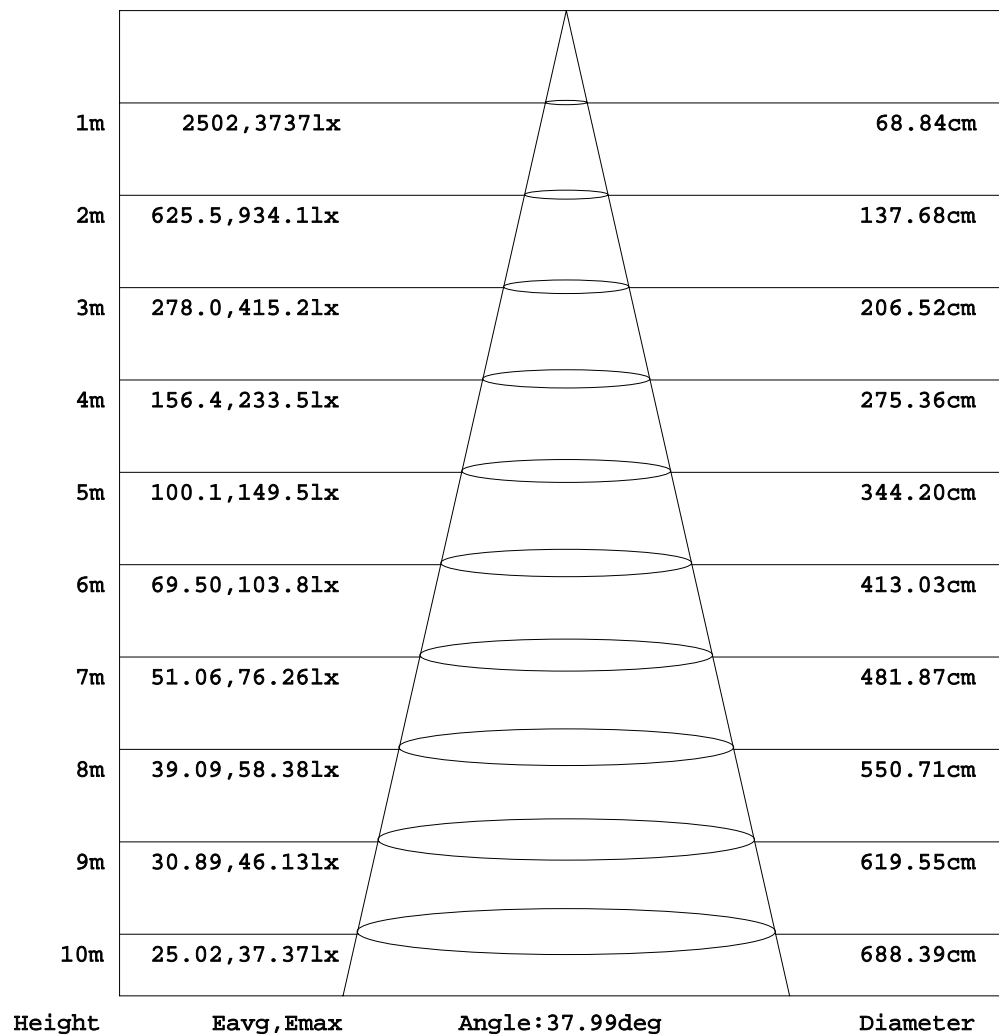
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-06-16

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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

Flux out:931.9 lm



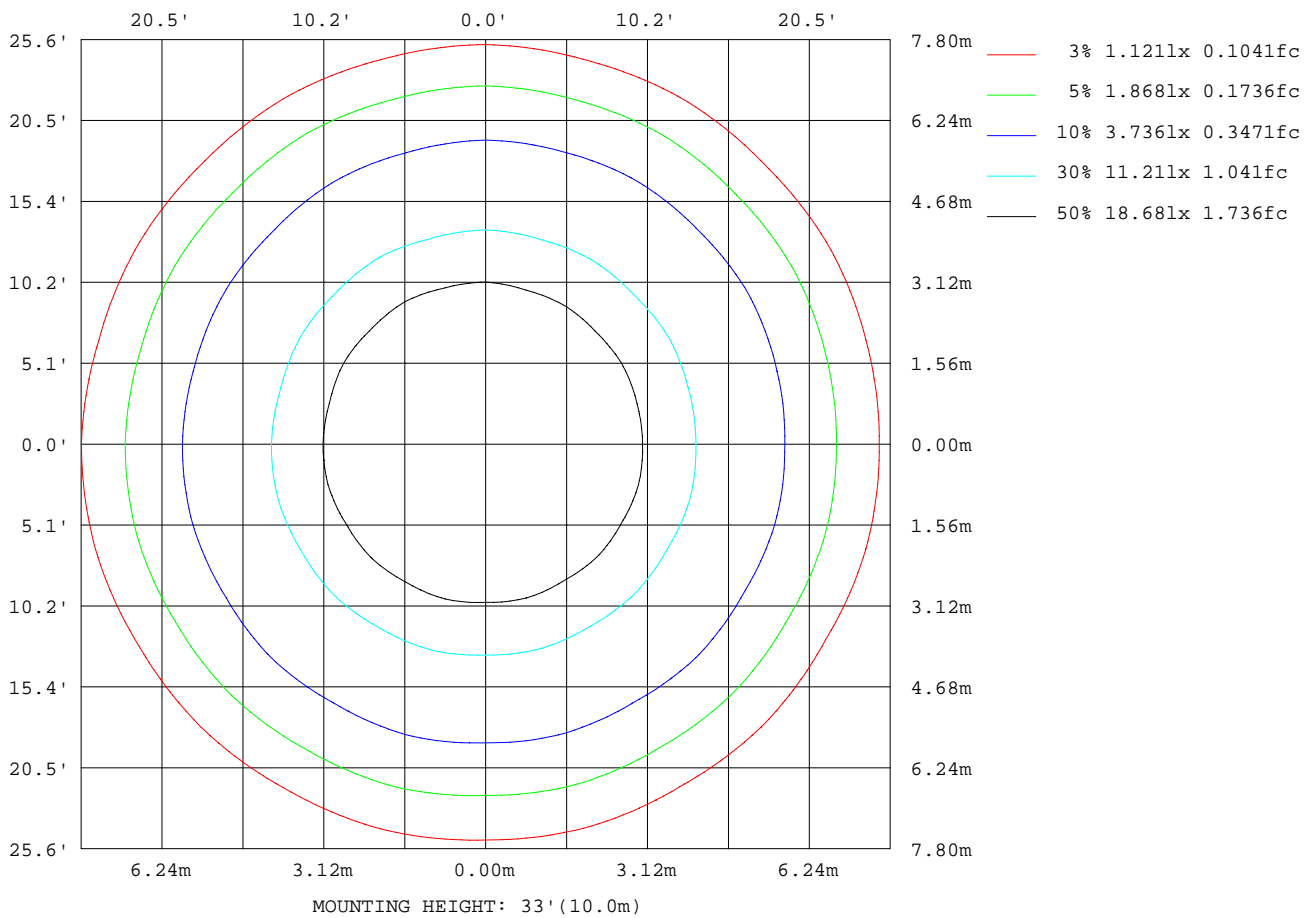
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 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:0.1120A P:23.60W PF:0.9310 Freq:50.00Hz Lamp Flux:1913.96x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

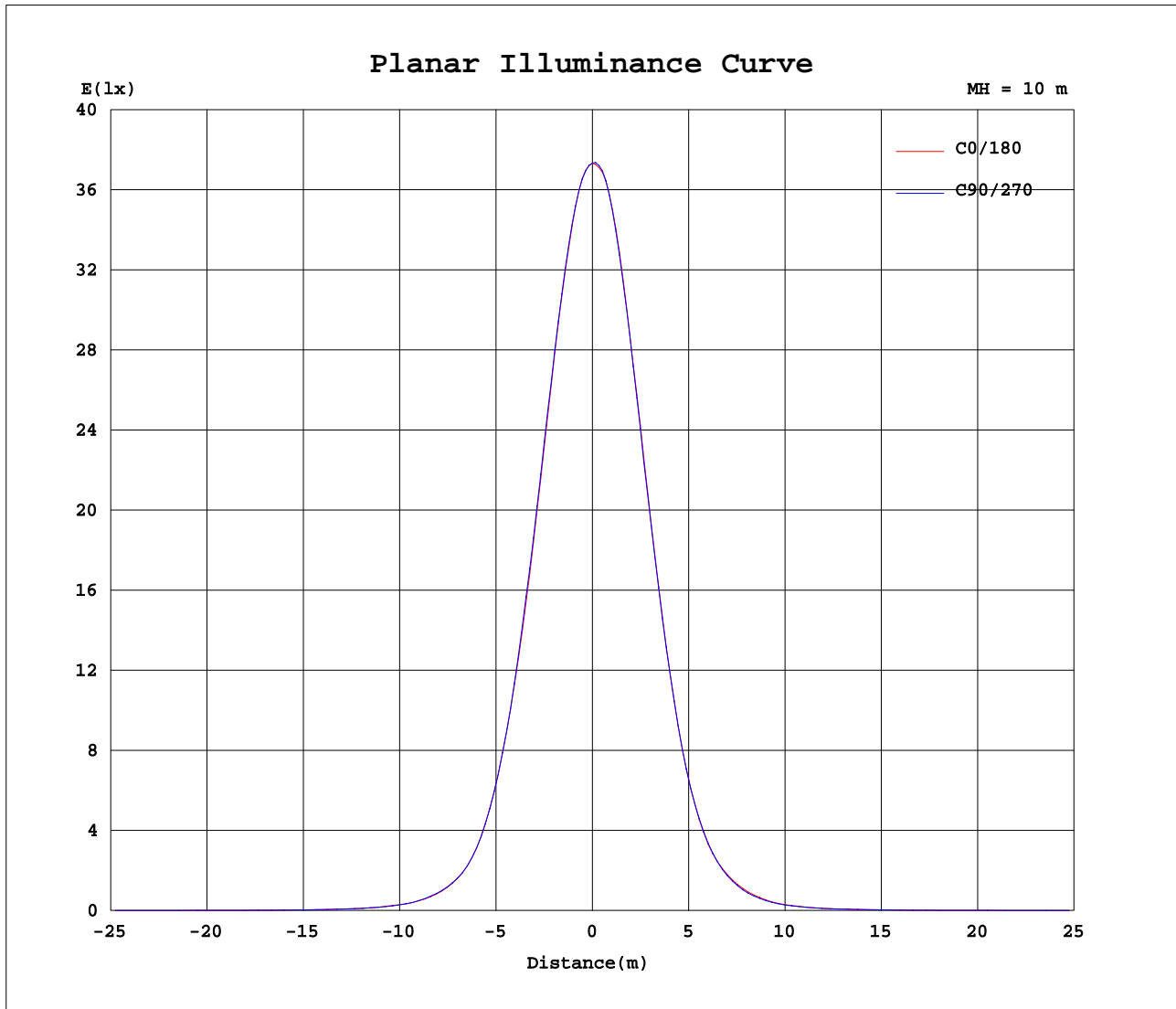
AvgL	cd/m2
L_0~180(65)av	7130
L_0~180(75)av	4775
L_0~180(85)av	4220
L_90~270(65)av	7028
L_90~270(75)av	4744
L_90~270(85)av	4248
L_45(65)av	7002
L_45(75)av	4747
L_45(85)av	4270

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
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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:

```