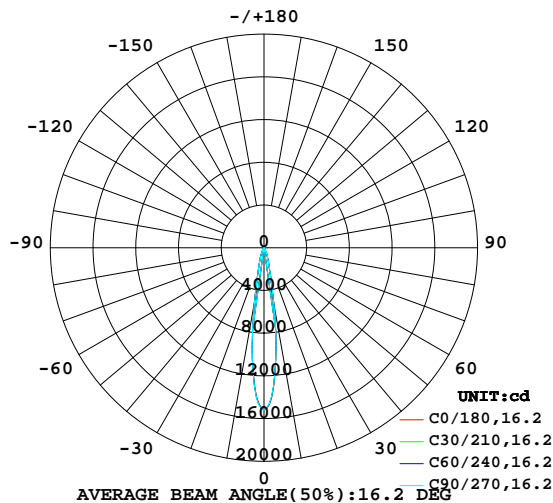


LUMINAIRE PHOTOMETRIC TEST REPORT

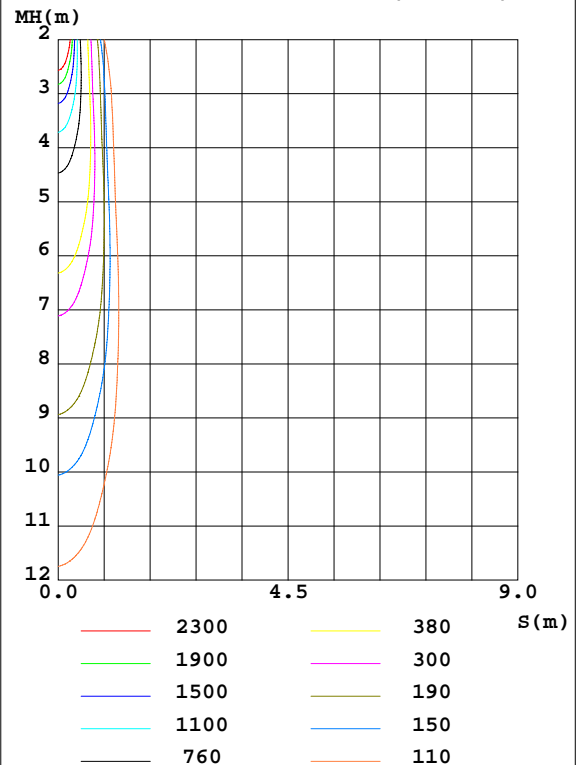
Test:U:225.1V I:0.1120A P:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 80.78 lm/W
MODEL	ALR70-24G30-15	I _{max} (cd)	15201	S/MH(C0/180)	0.28	
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	0.28	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1898.2	η UP,DN(C0-180)	0.0,50.3	
NOMINAL FLUX(lm)	1898.21	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7	
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:

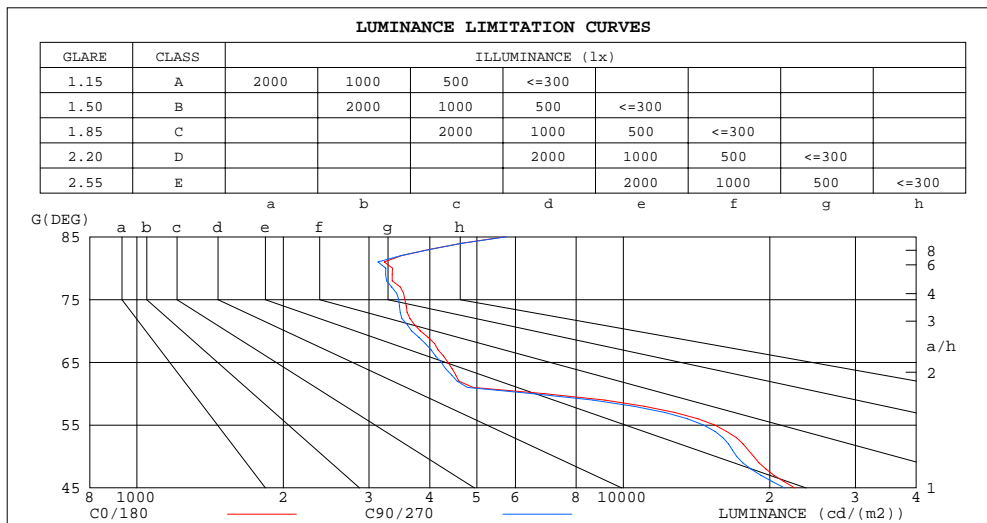
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	520.4	529.4	511.0	527.2	530.0	507.6	528.8	510.6	0- 10	902.4	902.4	47.5,47.5
20	106.0	107.3	106.1	105.2	104.4	101.4	104.6	103.4	10- 20	607.9	1510	79.6,79.6
30	22.83	24.56	22.97	23.16	22.63	22.40	22.94	22.09	20- 30	245.8	1756	92.5,92.5
40	6.817	7.005	6.689	6.521	6.449	6.543	6.468	6.504	30- 40	77.98	1834	96.6,96.6
50	3.372	3.353	3.105	2.964	3.063	3.156	3.171	3.215	40- 50	34.32	1868	98.4,98.4
60	0.9736	1.016	0.9196	0.9153	1.023	0.9763	0.9630	0.9573	50- 60	20.13	1888	99.5,99.5
70	0.3703	0.3631	0.3546	0.3507	0.4225	0.4231	0.3778	0.3981	60- 70	5.511	1894	99.8,99.8
80	0.1648	0.1604	0.1593	0.1590	0.1880	0.1889	0.1620	0.1641	70- 80	2.845	1897	99.9,99.9
90	0.1599	0.1613	0.1607	0.1612	0.0823	0.0826	0.0802	0.0818	80- 90	1.398	1898	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:0.1120A P:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	5702	5749
80	3353	3249
75	3556	3454
70	3825	3671
65	4357	4223
60	6880	6513
55	15414	14617
50	18537	17106
45	22508	21455

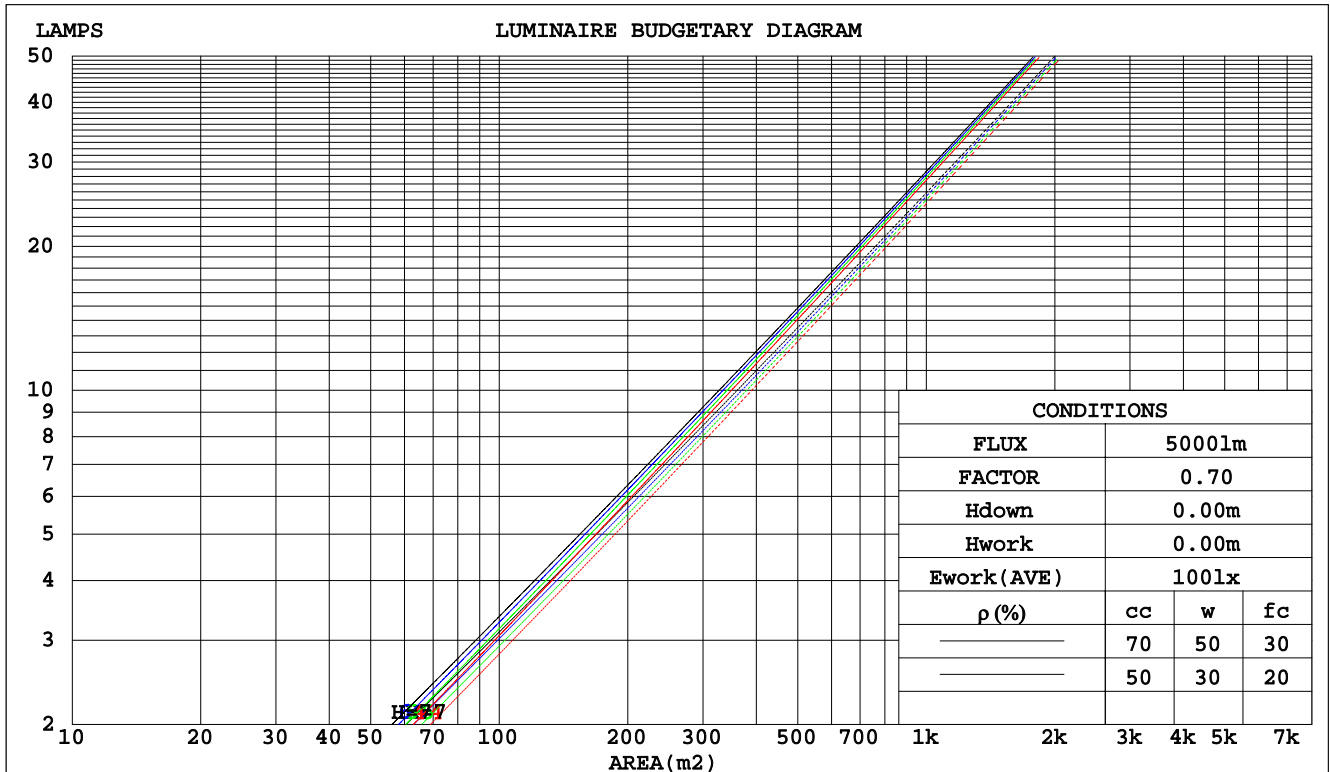
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-06-16

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:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 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	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	1.10	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.03	1.06	1.04	1.01	1.03	1.01	.99	1.00	.99	.97	.98	.96	.95	.94
3.0	1.04	1.00	.97	1.02	.99	.97	.00	.97	.95	.98	.95	.94	.95	.94	.92	.91
4.0	.00	.96	.93	.99	.95	.93	.97	.94	.91	.95	.92	.90	.93	.91	.89	.88
5.0	.96	.92	.90	.96	.92	.89	.94	.91	.88	.93	.90	.88	.91	.89	.87	.86
6.0	.93	.89	.87	.93	.89	.86	.91	.88	.86	.90	.87	.85	.89	.87	.85	.84
7.0	.91	.87	.84	.90	.86	.84	.89	.86	.83	.88	.85	.83	.87	.85	.83	.82
8.0	.88	.84	.82	.88	.84	.82	.87	.84	.81	.86	.83	.81	.85	.83	.81	.80
9.0	.86	.82	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.84	.81	.79	.78
10.0	.84	.80	.78	.84	.80	.78	.83	.80	.78	.83	.80	.77	.82	.79	.77	.76



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:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 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	.134	.076	.024	.127	.073	.023	.115	.066	.021	.104	.060	.019	.093	.054	.017	
2.0	.124	.068	.021	.118	.065	.020	.108	.060	.019	.099	.055	.017	.090	.051	.016	
3.0	.115	.061	.018	.110	.059	.018	.102	.055	.017	.094	.052	.016	.087	.048	.015	
4.0	.107	.056	.016	.103	.054	.016	.096	.051	.015	.090	.048	.015	.083	.045	.014	
5.0	.100	.051	.015	.097	.050	.015	.091	.047	.014	.086	.045	.013	.080	.043	.013	
6.0	.095	.047	.014	.092	.046	.013	.087	.044	.013	.082	.042	.012	.077	.041	.012	
7.0	.089	.044	.013	.087	.043	.012	.082	.042	.012	.078	.040	.012	.074	.039	.011	
8.0	.085	.041	.012	.083	.041	.012	.079	.039	.011	.075	.038	.011	.072	.037	.011	
9.0	.081	.039	.011	.079	.038	.011	.075	.037	.011	.072	.036	.010	.069	.035	.010	
10.0	.077	.037	.010	.075	.036	.010	.072	.035	.010	.069	.034	.010	.067	.034	.010	

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	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.128	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.115	.098	.083	.079	.068	.059	.046	.040	.034	.015	.013	.011	
4.0	.122	.098	.079	.105	.085	.069	.072	.059	.049	.042	.035	.029	.013	.011	.009	
5.0	.111	.085	.066	.095	.074	.058	.066	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.102	.075	.056	.088	.065	.049	.060	.046	.035	.035	.027	.021	.011	.009	.007	
7.0	.094	.067	.048	.081	.058	.042	.056	.041	.030	.032	.024	.018	.010	.008	.006	
8.0	.087	.060	.042	.075	.052	.036	.052	.037	.026	.030	.022	.015	.010	.007	.005	
9.0	.081	.054	.036	.070	.047	.032	.049	.033	.022	.028	.020	.013	.009	.006	.004	
10.0	.076	.050	.032	.066	.043	.028	.046	.030	.020	.027	.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:225.1V I:0.1120A P:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 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	12.2	12.8	12.4	12.9	13.1	12.0	12.7	12.2	12.8	13.0	
	3H	12.2	12.7	12.4	12.9	13.1	12.0	12.6	12.3	12.8	13.0
	4H	12.1	12.7	12.4	12.9	13.1	12.0	12.6	12.3	12.8	13.0
	6H	12.1	12.7	12.4	12.9	13.1	12.0	12.5	12.3	12.8	13.0
	8H	12.1	12.6	12.4	12.9	13.1	12.0	12.5	12.3	12.7	13.0
	12H	12.1	12.6	12.4	12.9	13.1	12.0	12.5	12.3	12.7	13.0
4H	2H	12.1	12.7	12.4	12.9	13.1	12.0	12.5	12.2	12.7	13.0
	3H	12.1	12.6	12.4	12.9	13.1	12.0	12.5	12.3	12.7	13.0
	4H	12.1	12.6	12.5	12.9	13.2	12.0	12.5	12.3	12.8	13.1
	6H	12.1	12.5	12.5	12.9	13.2	12.0	12.4	12.4	12.7	13.1
	8H	12.1	12.5	12.5	12.9	13.2	12.0	12.4	12.4	12.7	13.1
	12H	12.2	12.5	12.6	12.9	13.3	12.1	12.4	12.5	12.8	13.2
8H	4H	12.0	12.4	12.4	12.8	13.1	11.9	12.3	12.3	12.6	13.0
	6H	12.1	12.4	12.5	12.8	13.2	12.0	12.3	12.4	12.7	13.1
	8H	12.1	12.4	12.5	12.8	13.2	12.0	12.3	12.4	12.7	13.1
	12H	12.2	12.4	12.7	12.9	13.3	12.1	12.3	12.6	12.8	13.2
12H	4H	12.0	12.3	12.4	12.7	13.1	11.9	12.2	12.3	12.6	13.0
	6H	12.0	12.3	12.5	12.7	13.2	11.9	12.2	12.4	12.6	13.0
	8H	12.1	12.3	12.5	12.8	13.2	12.0	12.2	12.4	12.6	13.1
Variations with the observer position at spacings:											
S = 1.0H	+ 1.4 / - 2.1					+ 1.5 / - 2.2					
1.5H	+ 1.9 / - 1.1					+ 2.0 / - 1.2					
2.0H	+ 2.3 / - 4.4					+ 2.3 / - 4.3					

CIE Pub.117, 1898 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.2$)

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

UTILIZATION FACTORS TABLE

Test:U:225.1V I:0.1120A P:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

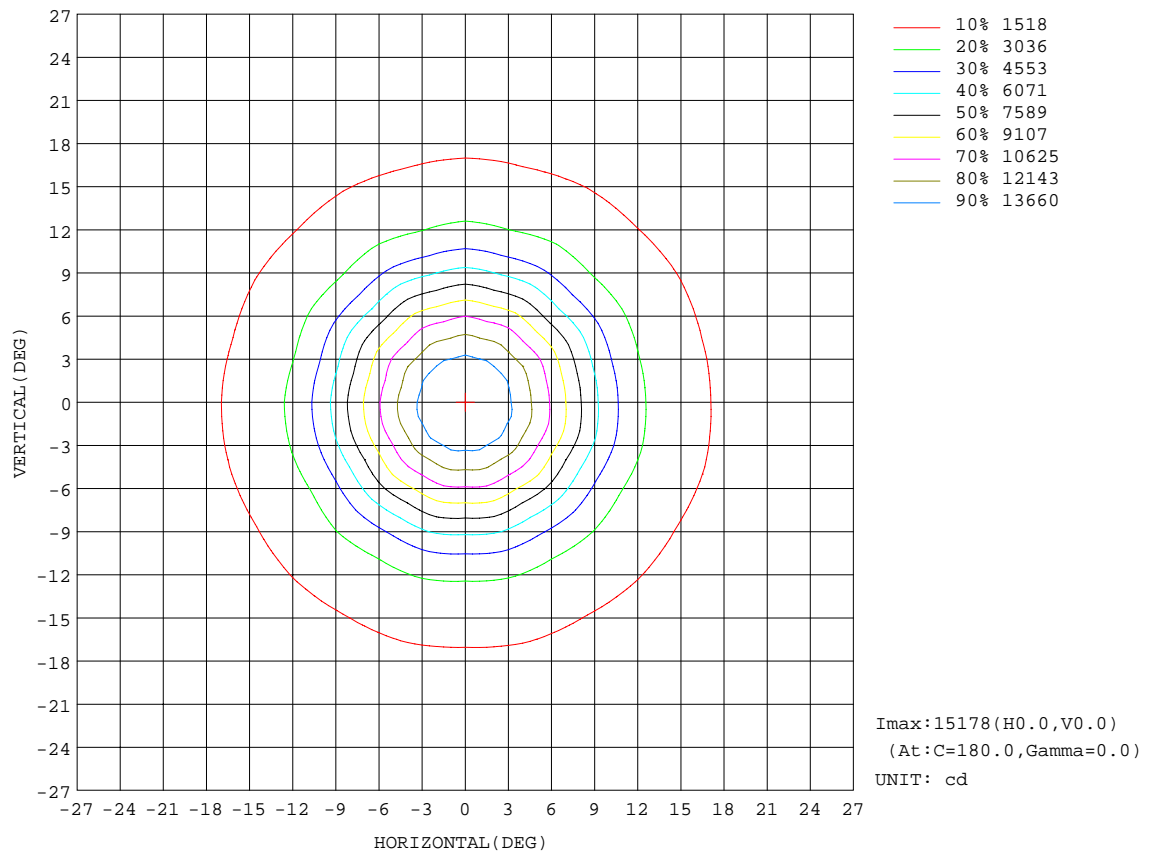
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	104	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	104	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	105	98
5.00	115	113	112	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: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:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



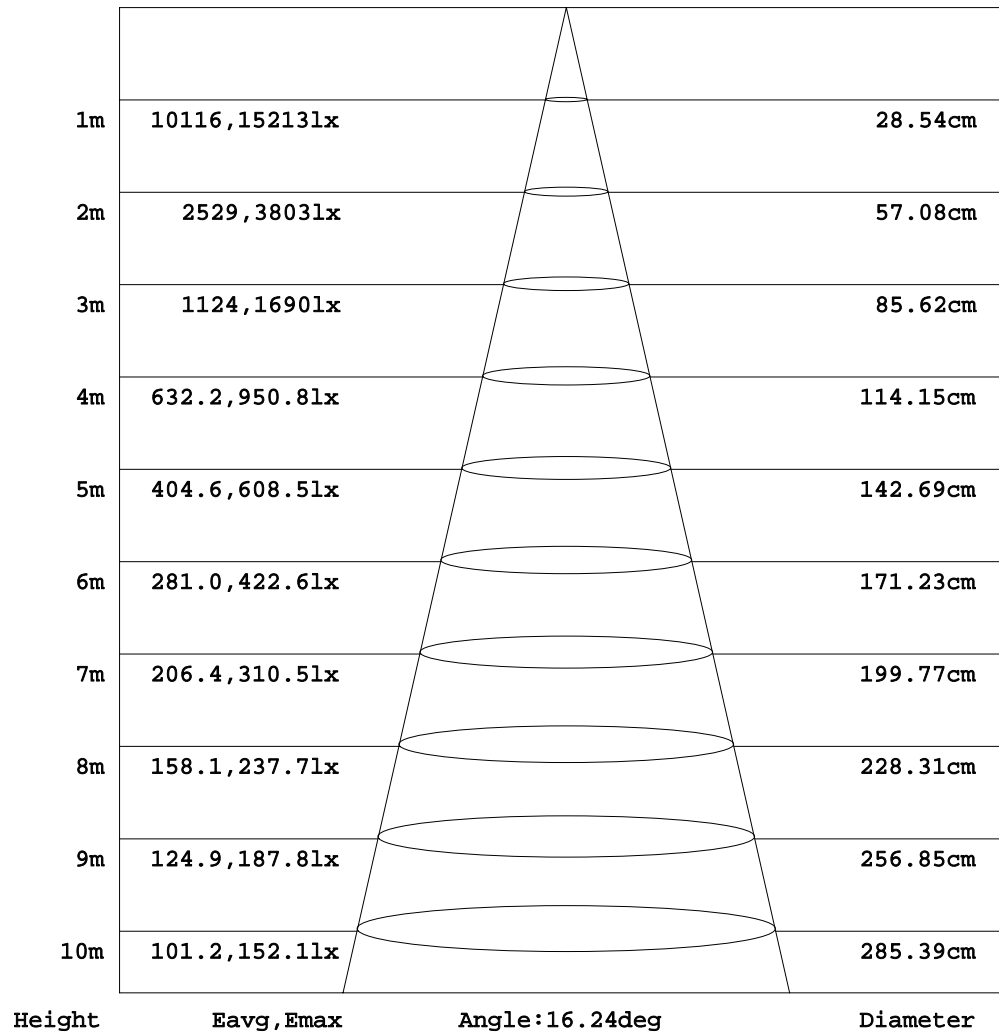
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

Flux out:797.2 lm



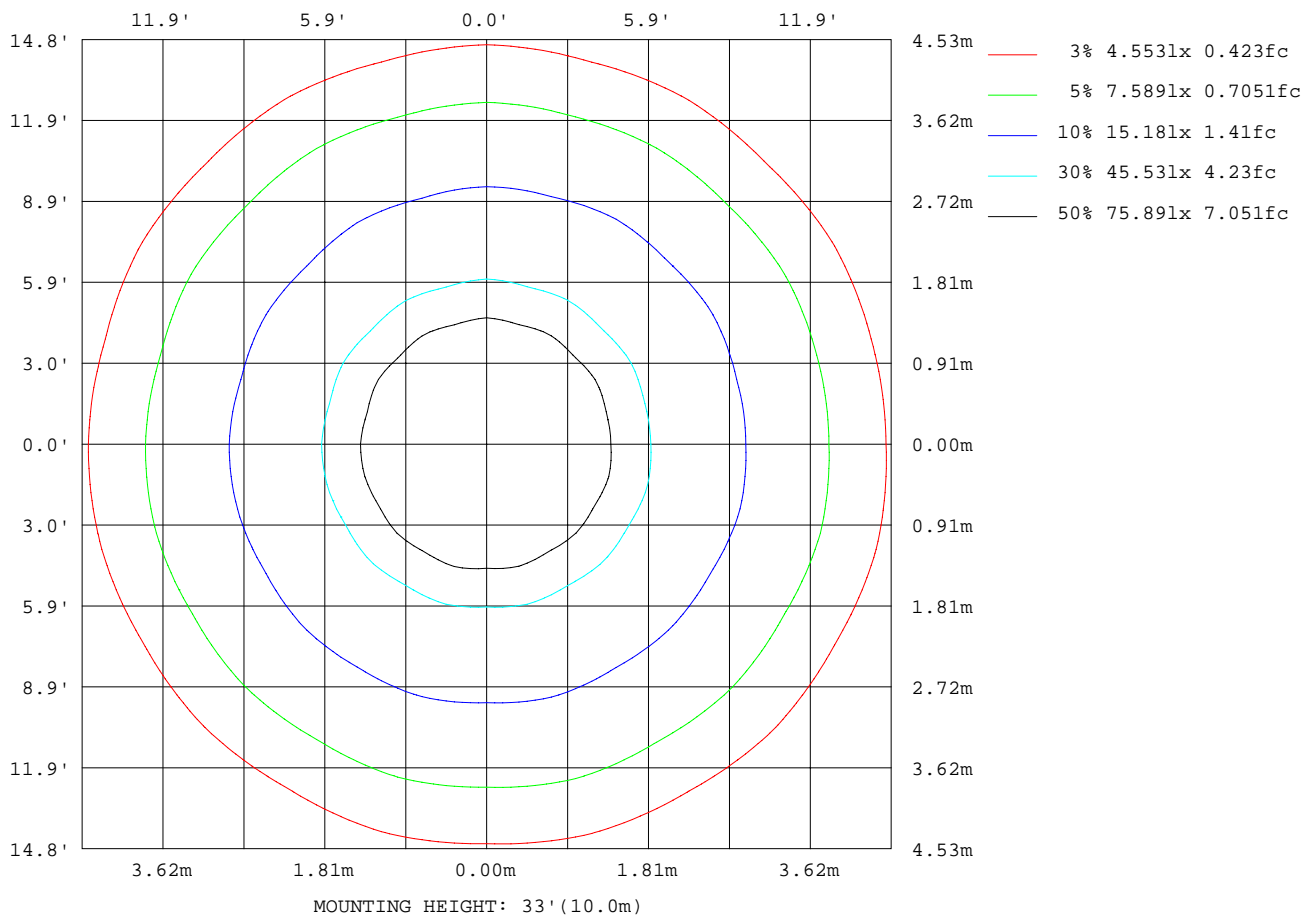
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 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:23.50W PF:0.9310 Freq:50.00Hz Lamp Flux:1898.21x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

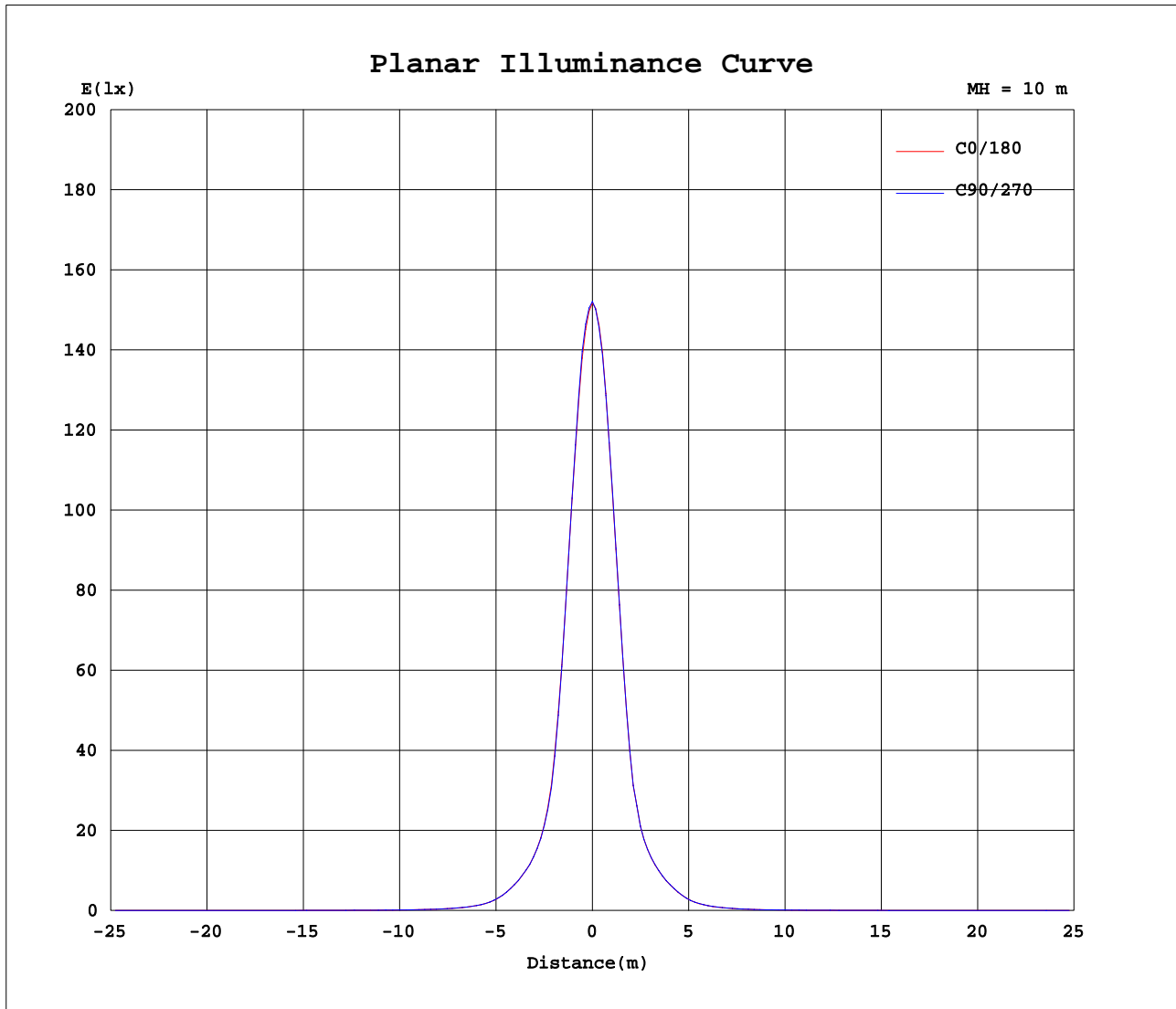
AvgL	cd/m2
L_0~180(65)av	4691
L_0~180(75)av	3869
L_0~180(85)av	5010
L_90~270(65)av	4414
L_90~270(75)av	3499
L_90~270(85)av	4991
L_45(65)av	4521
L_45(75)av	3706
L_45(85)av	5130

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]
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