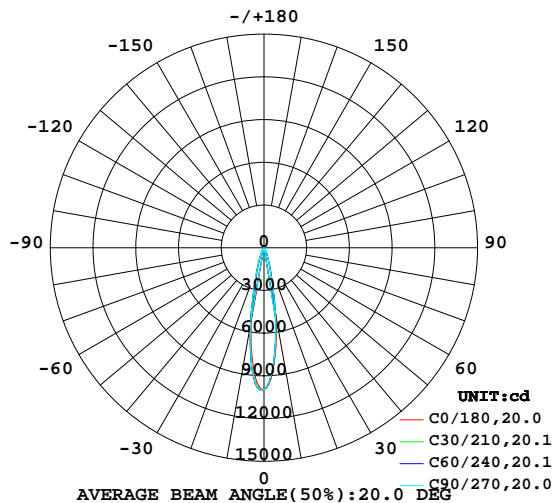


LUMINAIRE PHOTOMETRIC TEST REPORT

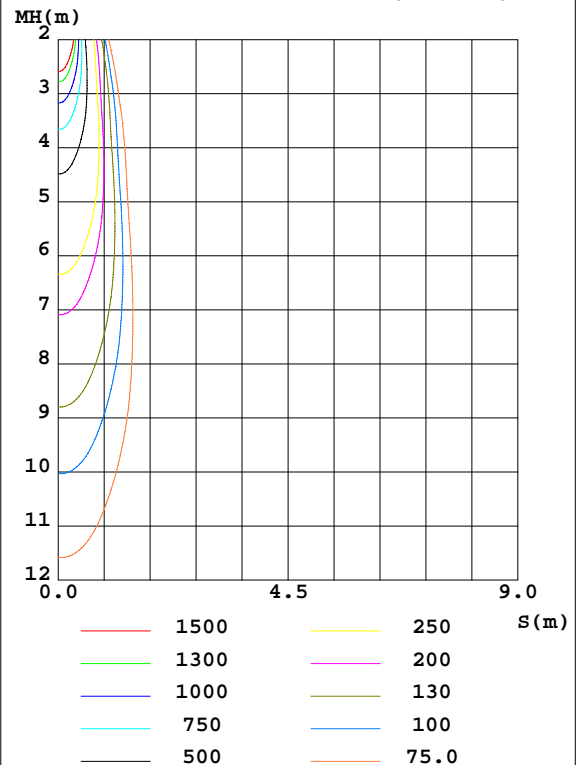
Test:U:225.1V I:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 59.71 lm/W
MODEL	ALT70-27G30-24	I _{max} (cd)	10040	S/MH(C0/180)	0.33	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.32	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1636.2	η UP,DN(C0-180)	0.0,54.3	
NOMINAL FLUX(lm)	1636.17	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,45.7	
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 V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

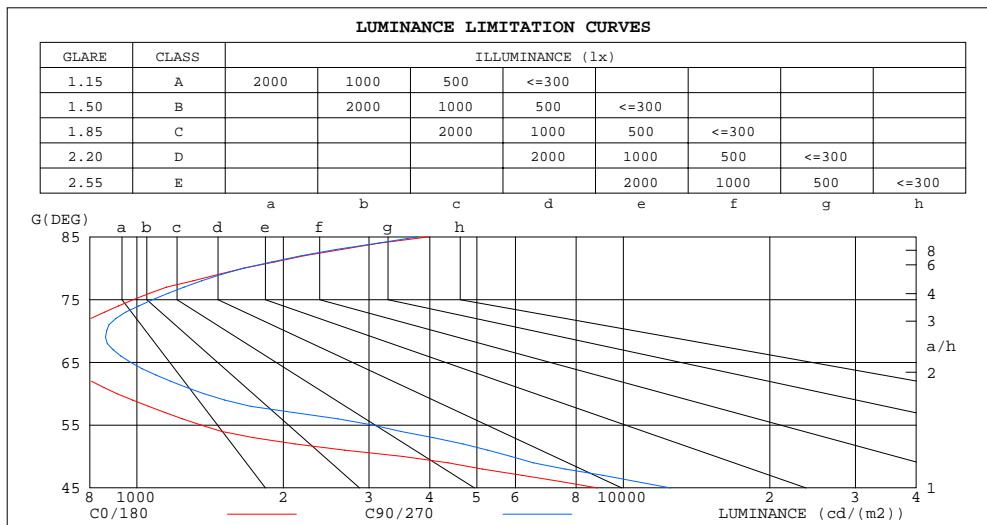
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	514.2	570.0	542.6	515.1	481.6	444.3	456.8	464.1	0- 10	688.8	688.8	42.1,42.1
20	104.9	123.8	121.0	105.4	92.52	83.72	85.94	85.19	10- 20	634.3	1323	80.9,80.9
30	22.27	28.53	27.18	22.78	18.87	17.10	16.42	17.55	20- 30	230.1	1553	94.9,94.9
40	4.263	5.851	5.677	4.516	3.752	3.153	2.678	2.650	30- 40	62.97	1616	98.8,98.8
50	0.6330	1.155	1.068	0.8330	0.5506	0.4318	0.3317	0.3224	40- 50	14.33	1631	99.7,99.7
60	0.1273	0.1576	0.1941	0.1792	0.1607	0.1149	0.1013	0.1177	50- 60	2.935	1633	99.8,99.8
70	0.0698	0.0742	0.0838	0.0795	0.0907	0.0840	0.0787	0.0826	60- 70	0.9979	1634	99.9,99.9
80	0.0806	0.0828	0.0814	0.0854	0.0791	0.0797	0.0767	0.0808	70- 80	0.8406	1635	99.9,99.9
90	0.1159	0.1121	0.1116	0.1145	0.0531	0.0539	0.0521	0.0527	80- 90	0.8889	1636	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: $\times 10cd$									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 V2.0.265
 Humidity: 65.0%
 Test Distance: 7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.1V I:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3985	3781
80	1658	1658
75	984	1079
70	729	867
65	712	971
60	909	1373
55	1354	3053
50	3517	5876
45	8842	12496

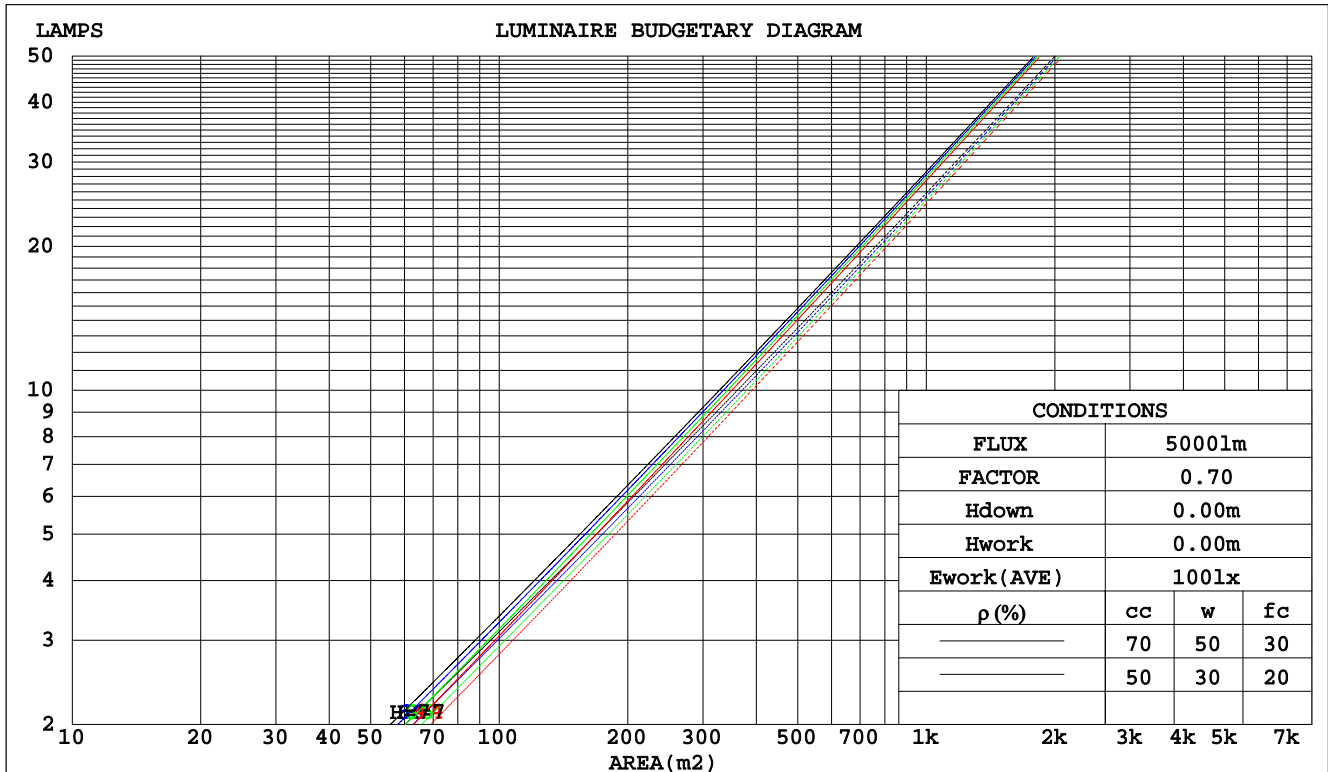
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 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	1.13	1.11	1.10	1.11	1.09	1.08	1.07	1.06	1.05	1.03	1.02	1.01	.00	.99	.99	.97
2.0	1.08	1.05	1.03	1.06	1.04	1.02	1.03	1.01	.99	1.00	.99	.97	.98	.97	.95	.94
3.0	1.04	1.00	.97	1.02	.99	.97	.00	.97	.95	.98	.96	.94	.96	.94	.92	.91
4.0	.00	.96	.93	.99	.95	.93	.97	.94	.92	.95	.93	.91	.93	.91	.90	.88
5.0	.96	.93	.90	.96	.92	.89	.94	.91	.89	.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	.84	.83	.82
8.0	.88	.84	.82	.88	.84	.81	.87	.83	.81	.86	.83	.81	.85	.82	.80	.80
9.0	.86	.82	.79	.85	.82	.79	.85	.81	.79	.84	.81	.79	.83	.81	.79	.78
10.0	.84	.80	.77	.83	.80	.77	.83	.79	.77	.82	.79	.77	.81	.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 V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:225.1V I:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 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	.133	.076	.024	.126	.072	.023	.114	.065	.021	.103	.059	.019	.092	.053	.017		
2.0	.123	.067	.021	.117	.065	.020	.107	.060	.019	.098	.055	.017	.089	.050	.016		
3.0	.114	.061	.018	.110	.059	.018	.101	.055	.017	.093	.051	.016	.086	.048	.015		
4.0	.107	.055	.016	.103	.054	.016	.096	.051	.015	.089	.048	.014	.083	.045	.014		
5.0	.100	.051	.015	.097	.050	.015	.091	.047	.014	.085	.045	.013	.080	.043	.013		
6.0	.095	.047	.014	.092	.046	.013	.087	.044	.013	.082	.043	.012	.077	.041	.012		
7.0	.090	.044	.013	.087	.044	.012	.083	.042	.012	.079	.040	.012	.075	.039	.011		
8.0	.085	.042	.012	.083	.041	.012	.079	.040	.011	.076	.038	.011	.072	.037	.011		
9.0	.081	.039	.011	.080	.039	.011	.076	.038	.011	.073	.037	.010	.070	.035	.010		
10.0	.078	.037	.010	.076	.037	.010	.073	.036	.010	.070	.035	.010	.068	.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	.134	.113	.096	.115	.098	.084	.079	.068	.059	.046	.040	.035	.015	.013	.011	
4.0	.122	.098	.080	.104	.085	.069	.072	.059	.049	.042	.034	.029	.013	.011	.009	
5.0	.111	.085	.067	.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	.033	.024	.018	.011	.008	.006	
8.0	.088	.060	.042	.075	.052	.036	.052	.037	.026	.030	.022	.015	.010	.007	.005	
9.0	.082	.055	.036	.070	.047	.032	.049	.033	.022	.028	.020	.013	.009	.006	.004	
10.0	.077	.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 V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.1V I:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 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	2H	10.1	10.7	10.3	10.9	11.0	11.3	11.9	11.5	12.1	12.2
	3H	10.0	10.6	10.2	10.7	10.9	11.2	11.8	11.4	12.0	12.1
	4H	9.9	10.5	10.2	10.7	10.9	11.1	11.7	11.4	11.9	12.1
	6H	9.9	10.4	10.1	10.6	10.9	11.1	11.6	11.3	11.8	12.0
	8H	9.9	10.4	10.1	10.6	10.9	11.0	11.5	11.3	11.8	12.0
	12H	9.9	10.4	10.2	10.6	10.9	11.0	11.5	11.3	11.8	12.0
4H	2H	9.9	10.5	10.2	10.7	10.9	11.1	11.7	11.4	11.9	12.1
	3H	9.8	10.2	10.1	10.5	10.8	11.0	11.4	11.3	11.7	12.0
	4H	9.7	10.1	10.0	10.4	10.7	10.9	11.3	11.2	11.6	11.9
	6H	9.6	10.0	10.0	10.4	10.7	10.8	11.2	11.2	11.5	11.9
	8H	9.6	10.0	10.0	10.4	10.7	10.8	11.2	11.2	11.5	11.9
	12H	9.7	10.1	10.1	10.4	10.8	10.8	11.2	11.2	11.5	11.9
8H	4H	9.5	9.9	9.9	10.3	10.6	10.7	11.1	11.1	11.4	11.8
	6H	9.5	9.8	9.9	10.2	10.6	10.7	11.0	11.1	11.4	11.8
	8H	9.6	9.8	10.0	10.2	10.7	10.7	11.0	11.1	11.4	11.8
	12H	9.7	9.9	10.2	10.4	10.8	10.8	11.0	11.2	11.4	11.9
12H	4H	9.5	9.8	9.9	10.2	10.6	10.7	11.0	11.1	11.4	11.8
	6H	9.5	9.8	9.9	10.2	10.6	10.6	10.9	11.1	11.3	11.8
	8H	9.5	9.8	10.0	10.2	10.7	10.7	10.9	11.1	11.3	11.8
Variations with the observer position at spacings:											
S = 1.0H	+ 2.8 / - 7.0					+ 2.8 / - 7.5					
1.5H	+ 4.9 / - 6.5					+ 4.8 / - 5.9					
2.0H	+ 4.5 / - 2.5					+ 5.0 / - 4.0					

CIE Pub.117, 1636 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.7$)

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:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

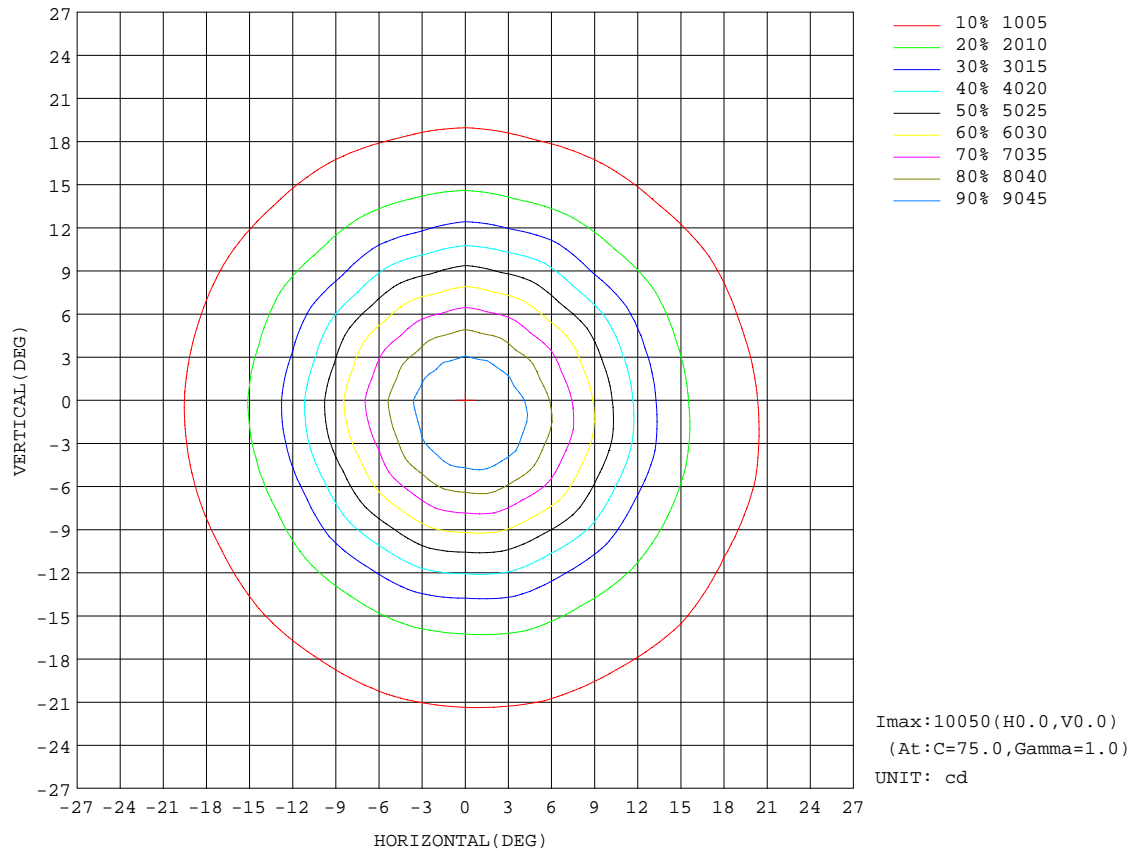
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	81	78
0.80	98	93	89	97	92	89	96	92	89	85
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	105	104	98
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 V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.1V I:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

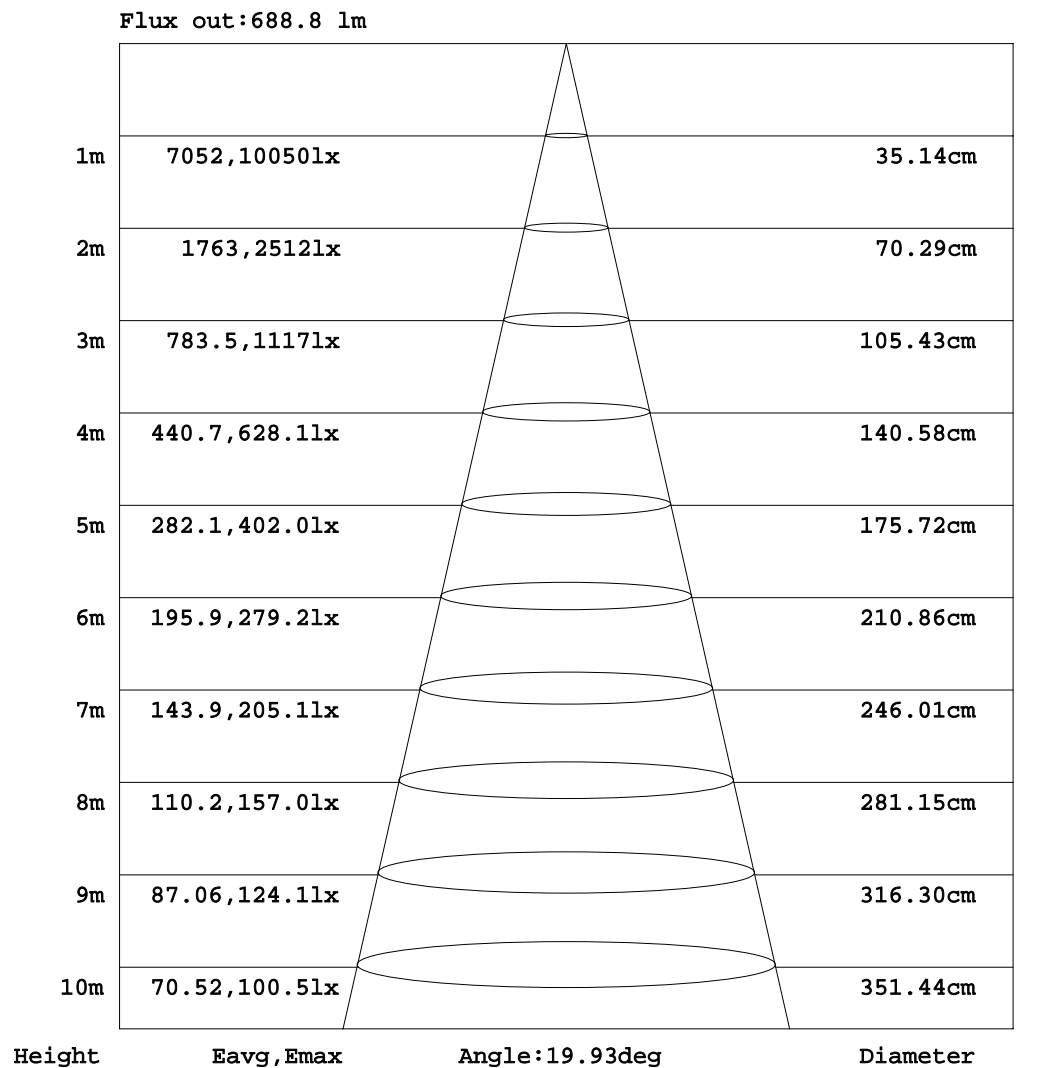


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



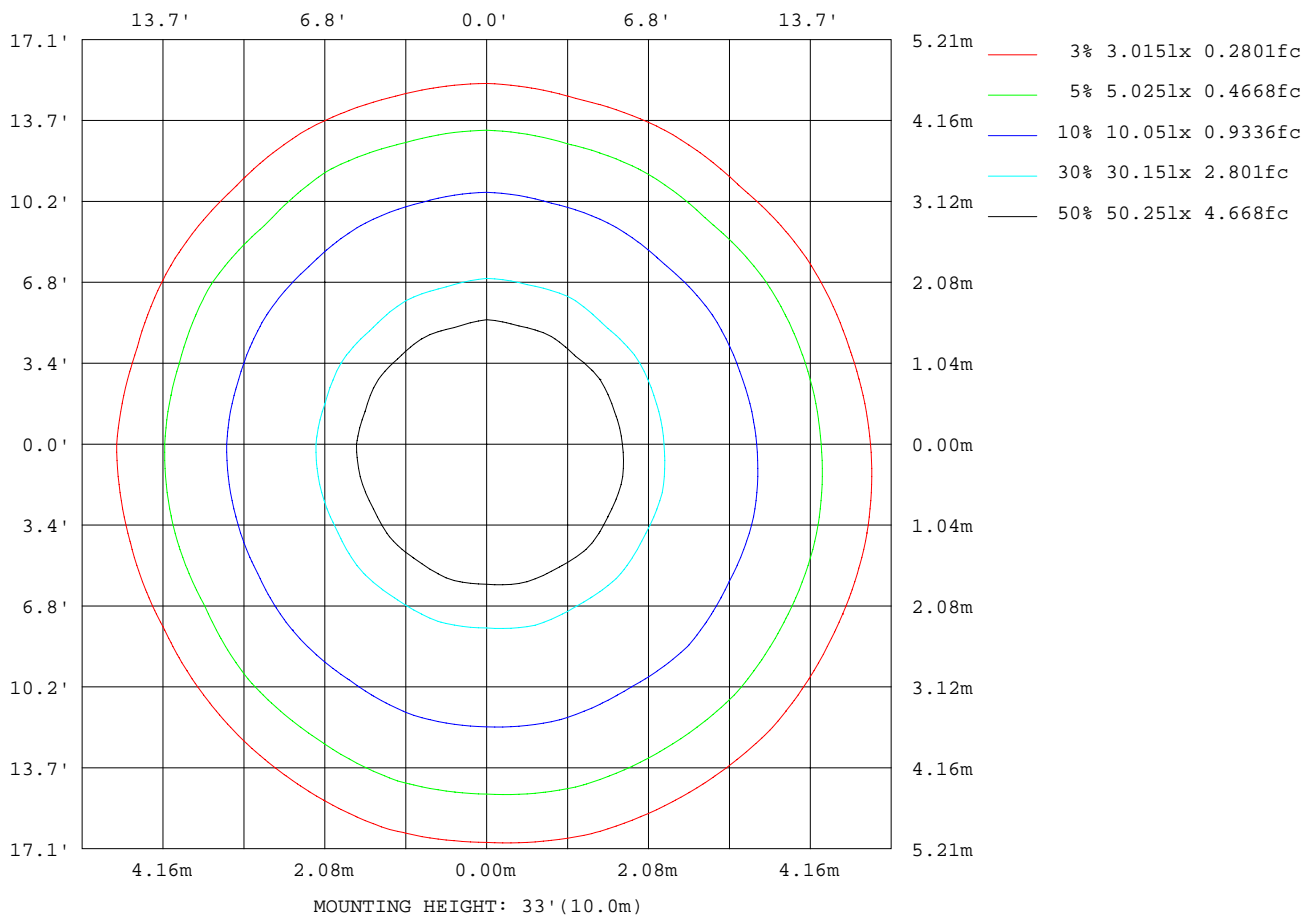
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 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:0.1280A P:27.40W PF:0.9500 Freq:50.00Hz Lamp Flux:1636.17x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

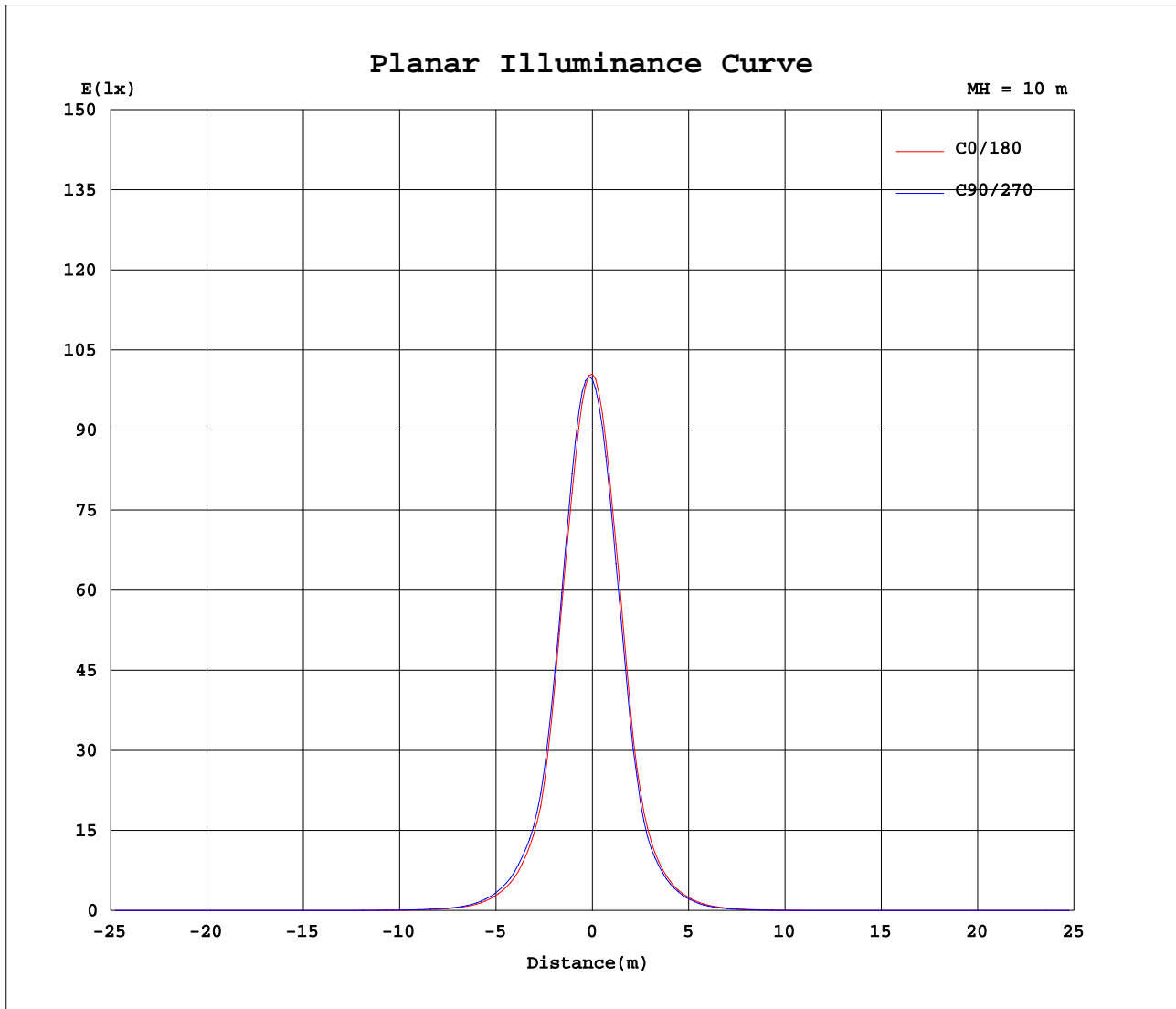
AvgL	cd/m2
L_0~180(65)av	808
L_0~180(75)av	1068
L_0~180(85)av	3303
L_90~270(65)av	820
L_90~270(75)av	1087
L_90~270(85)av	3170
L_45(65)av	788
L_45(75)av	1079
L_45(85)av	3363

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:

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γ Interval: 1.0DEG
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