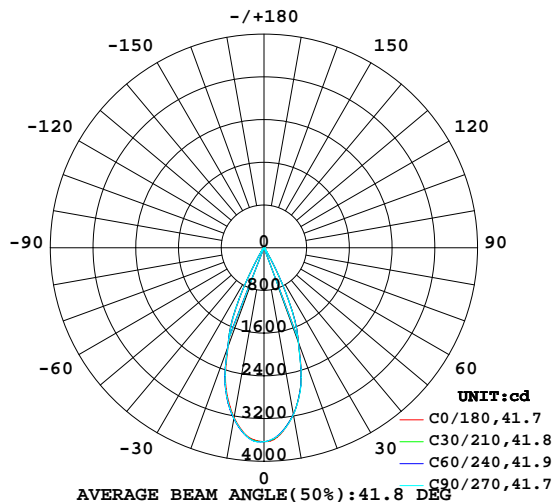


LUMINAIRE PHOTOMETRIC TEST REPORT

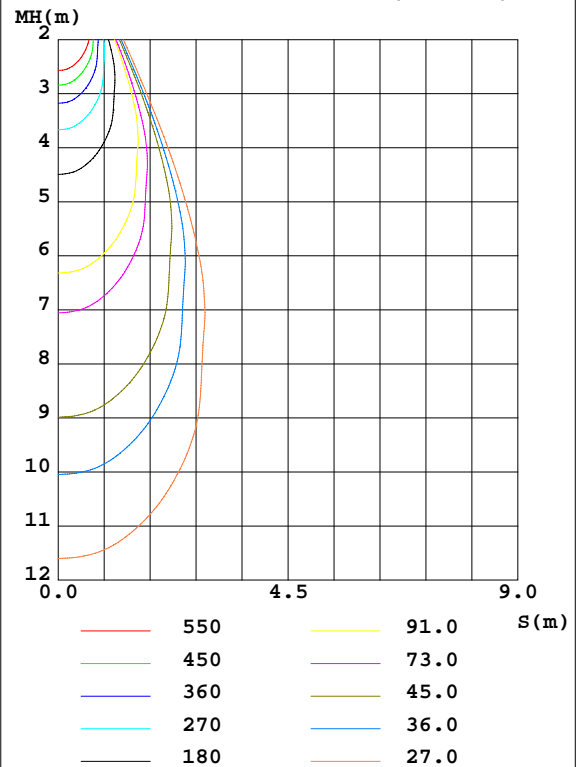
Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:60		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 61.78 lm/W
MODEL	ALT70-27G30-45	I _{max} (cd)	3639	S/MH(C0/180)	0.65	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.65	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1680.3	η UP,DN(C0-180)	0.0,51.2	
NOMINAL FLUX(lm)	1680.3	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	0.70	

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:

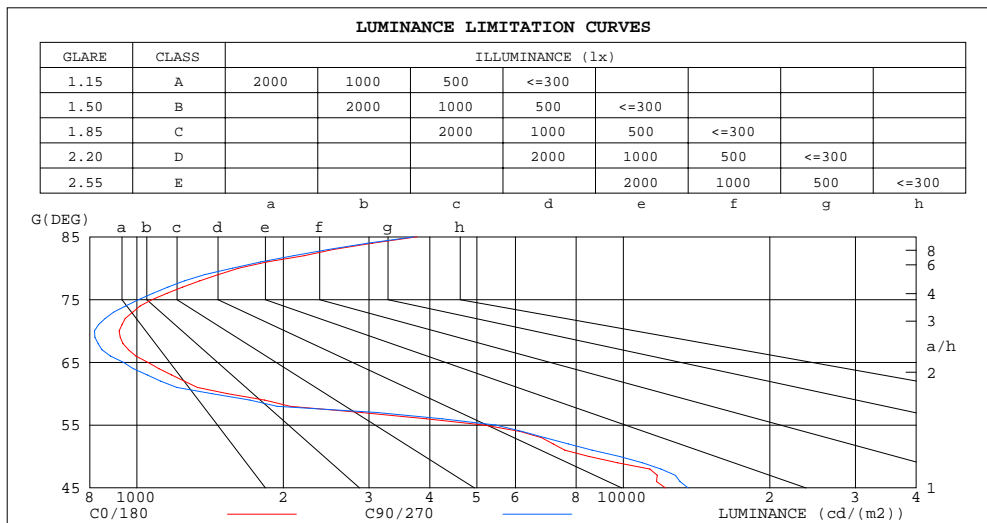
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	3227	3262	3244	3217	3175	3154	3176	3187	0- 10	326.2	326.2	19.4,19.4
20	1964	2032	1977	1939	1896	1855	1885	1885	10- 20	732.4	1059	63,63
30	373.2	403.3	377.7	373.3	328.7	304.1	332.9	344.8	20- 30	512.5	1571	93.5,93.5
40	46.43	48.29	45.65	44.80	45.01	42.02	46.06	45.92	30- 40	77.39	1648	98.1,98.1
50	15.41	18.16	17.82	18.33	16.81	17.32	19.34	16.36	40- 50	21.60	1670	99.4,99.4
60	2.167	2.304	2.016	2.040	1.971	1.787	1.954	2.079	50- 60	7.395	1677	99.8,99.8
70	0.8881	0.8135	0.7908	0.7478	0.7933	0.8219	0.8094	0.9129	60- 70	1.226	1679	99.9,99.9
80	0.7938	0.8022	0.7705	0.8030	0.6373	0.6299	0.6252	0.6462	70- 80	0.7742	1679	99.9,99.9
90	1.114	1.115	1.123	1.136	0.6491	0.6455	0.6378	0.6266	80- 90	0.8594	1680	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 V2.0.362
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3764	3716
80	1619	1570
75	1075	1009
70	920	818
65	1053	938
60	1535	1427
55	5169	5468
50	8491	9812
45	12207	13593

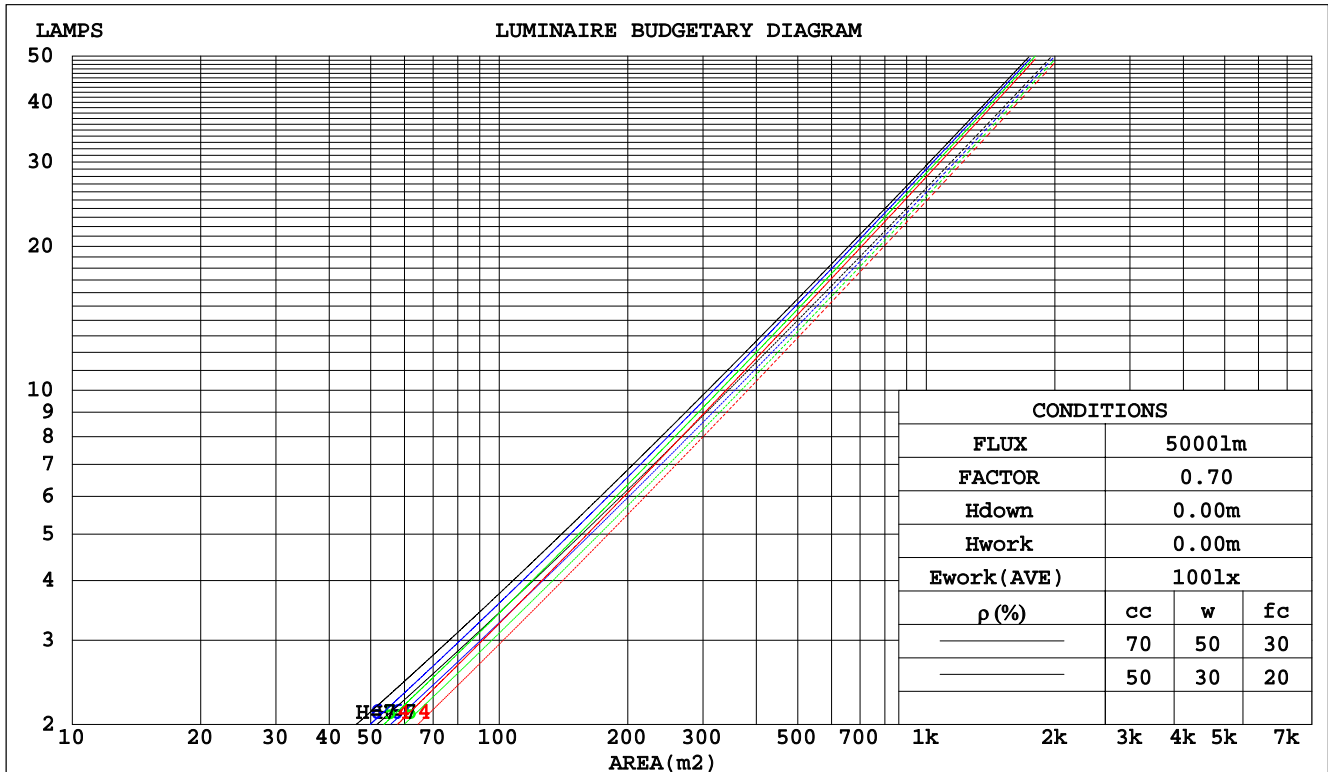
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 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	.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	1.00	.99	.98	.97	.95
2.0	1.06	1.03	.00	1.04	1.01	.99	1.01	.99	.96	.98	.96	.94	.95	.94	.93	.91
3.0	1.00	.96	.93	.99	.95	.92	.97	.93	.91	.94	.92	.90	.92	.90	.88	.87
4.0	.96	.91	.88	.94	.90	.87	.92	.89	.86	.91	.88	.85	.89	.86	.84	.83
5.0	.91	.86	.83	.90	.86	.83	.89	.85	.82	.87	.84	.81	.86	.83	.80	.79
6.0	.87	.82	.79	.86	.82	.78	.85	.81	.78	.84	.80	.77	.82	.79	.77	.76
7.0	.83	.78	.75	.83	.78	.75	.82	.77	.74	.80	.77	.74	.79	.76	.74	.73
8.0	.80	.75	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.77	.73	.71	.70
9.0	.77	.72	.69	.76	.72	.69	.75	.71	.68	.75	.71	.68	.74	.70	.68	.67
10.0	.74	.69	.66	.73	.69	.66	.73	.68	.66	.72	.68	.65	.71	.68	.65	.64



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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 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	.153	.087	.027	.146	.083	.026	.133	.077	.024	.122	.070	.023	.111	.065	.021		
2.0	.143	.078	.024	.138	.076	.023	.127	.071	.022	.118	.066	.021	.109	.062	.019		
3.0	.135	.072	.021	.130	.070	.021	.121	.066	.020	.113	.062	.019	.106	.059	.018		
4.0	.127	.066	.019	.123	.065	.019	.116	.062	.018	.109	.059	.018	.103	.056	.017		
5.0	.121	.062	.018	.118	.060	.018	.111	.058	.017	.105	.056	.017	.100	.053	.016		
6.0	.115	.058	.017	.112	.057	.016	.107	.055	.016	.101	.053	.016	.097	.051	.015		
7.0	.110	.054	.015	.107	.054	.015	.103	.052	.015	.098	.050	.015	.094	.049	.014		
8.0	.105	.051	.014	.103	.051	.014	.099	.049	.014	.095	.048	.014	.091	.047	.014		
9.0	.101	.049	.014	.099	.048	.014	.095	.047	.013	.092	.046	.013	.088	.045	.013		
10.0	.097	.047	.013	.095	.046	.013	.092	.045	.013	.089	.044	.013	.086	.043	.012		

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	.169	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.131	.114	.100	.089	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.138	.113	.093	.119	.098	.081	.081	.068	.057	.047	.040	.033	.015	.013	.011	
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.063	.101	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.109	.077	.053	.094	.066	.046	.065	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.102	.069	.045	.088	.059	.039	.061	.042	.028	.035	.025	.017	.011	.008	.006	
8.0	.096	.062	.039	.082	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.091	.057	.034	.078	.049	.029	.054	.035	.021	.031	.020	.012	.010	.007	.004	
10.0	.086	.052	.030	.074	.045	.026	.051	.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 V2.0.362
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 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	10.8	11.5	11.0	11.7	11.8	10.8	11.5	11.0	11.7	11.9
3H	10.6	11.3	10.9	11.5	11.7	10.6	11.3	10.9	11.5	11.7
4H	10.5	11.2	10.8	11.4	11.6	10.6	11.2	10.8	11.4	11.7
6H	10.5	11.1	10.8	11.3	11.6	10.5	11.1	10.8	11.4	11.6
8H	10.5	11.1	10.8	11.3	11.6	10.5	11.1	10.8	11.3	11.6
12H	10.5	11.0	10.8	11.3	11.6	10.5	11.1	10.8	11.3	11.6
4H 2H	10.5	11.2	10.8	11.4	11.6	10.6	11.2	10.8	11.5	11.7
3H	10.4	11.0	10.7	11.2	11.5	10.4	11.0	10.7	11.3	11.5
4H	10.3	10.8	10.6	11.1	11.4	10.3	10.9	10.7	11.2	11.5
6H	10.3	10.7	10.6	11.1	11.4	10.3	10.7	10.6	11.1	11.4
8H	10.2	10.7	10.6	11.0	11.4	10.3	10.7	10.7	11.1	11.4
12H	10.3	10.7	10.7	11.1	11.4	10.3	10.7	10.7	11.1	11.5
8H 4H	10.2	10.6	10.6	11.0	11.3	10.2	10.6	10.6	11.0	11.3
6H	10.1	10.5	10.6	10.9	11.3	10.2	10.5	10.6	10.9	11.3
8H	10.1	10.5	10.6	10.9	11.3	10.2	10.5	10.6	10.9	11.3
12H	10.2	10.5	10.7	11.0	11.4	10.3	10.5	10.7	11.0	11.4
12H 4H	10.1	10.5	10.5	10.9	11.3	10.1	10.5	10.6	10.9	11.3
6H	10.1	10.4	10.5	10.8	11.3	10.1	10.4	10.6	10.8	11.3
8H	10.1	10.4	10.6	10.8	11.3	10.1	10.4	10.6	10.9	11.3
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / - 6.1					+ 2.9 / - 6.4				
1.5H	+ 4.0 / - 4.0					+ 3.9 / - 4.2				
2.0H	+ 4.1 / - 4.8					+ 4.1 / - 5.4				

CIE Pub.117, 1680 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.8$)

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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

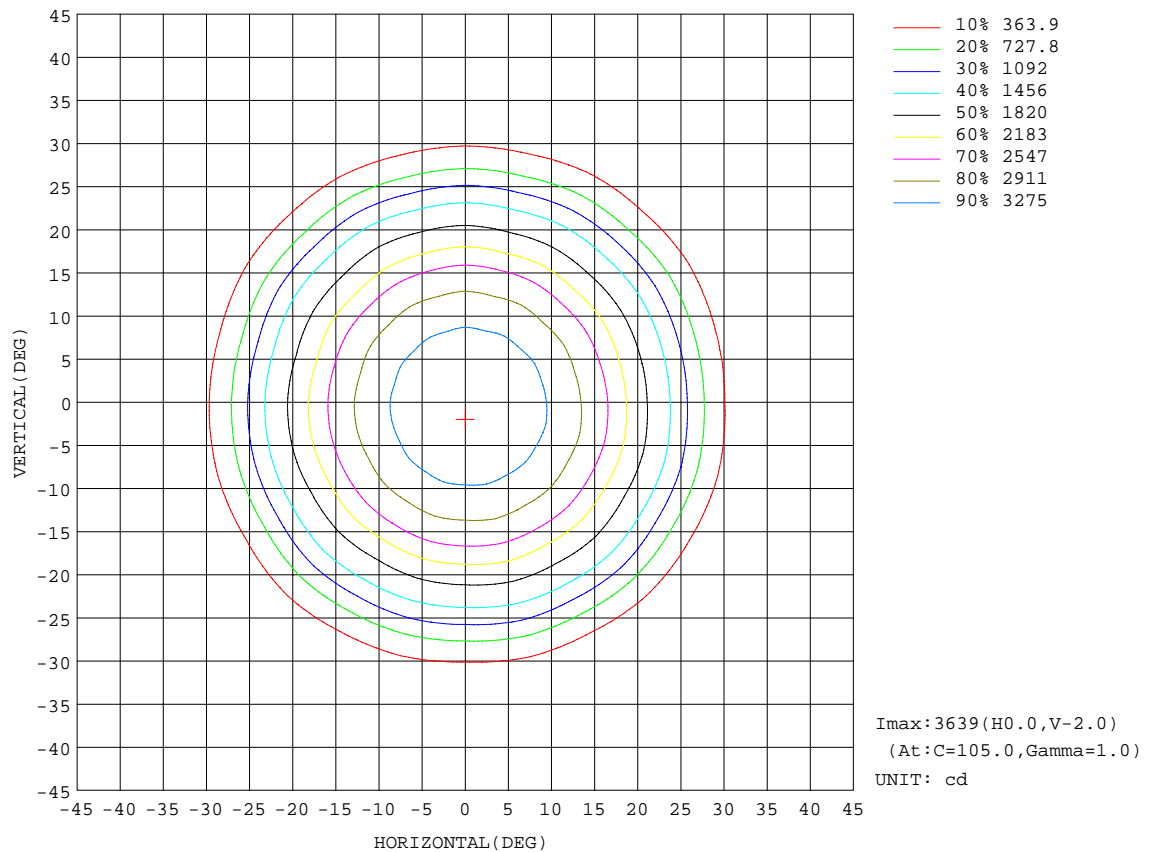
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	85	81	90	84	81	89	84	81	78
0.80	97	92	89	97	92	89	96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

ISOCANDELA DIAGRAM

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

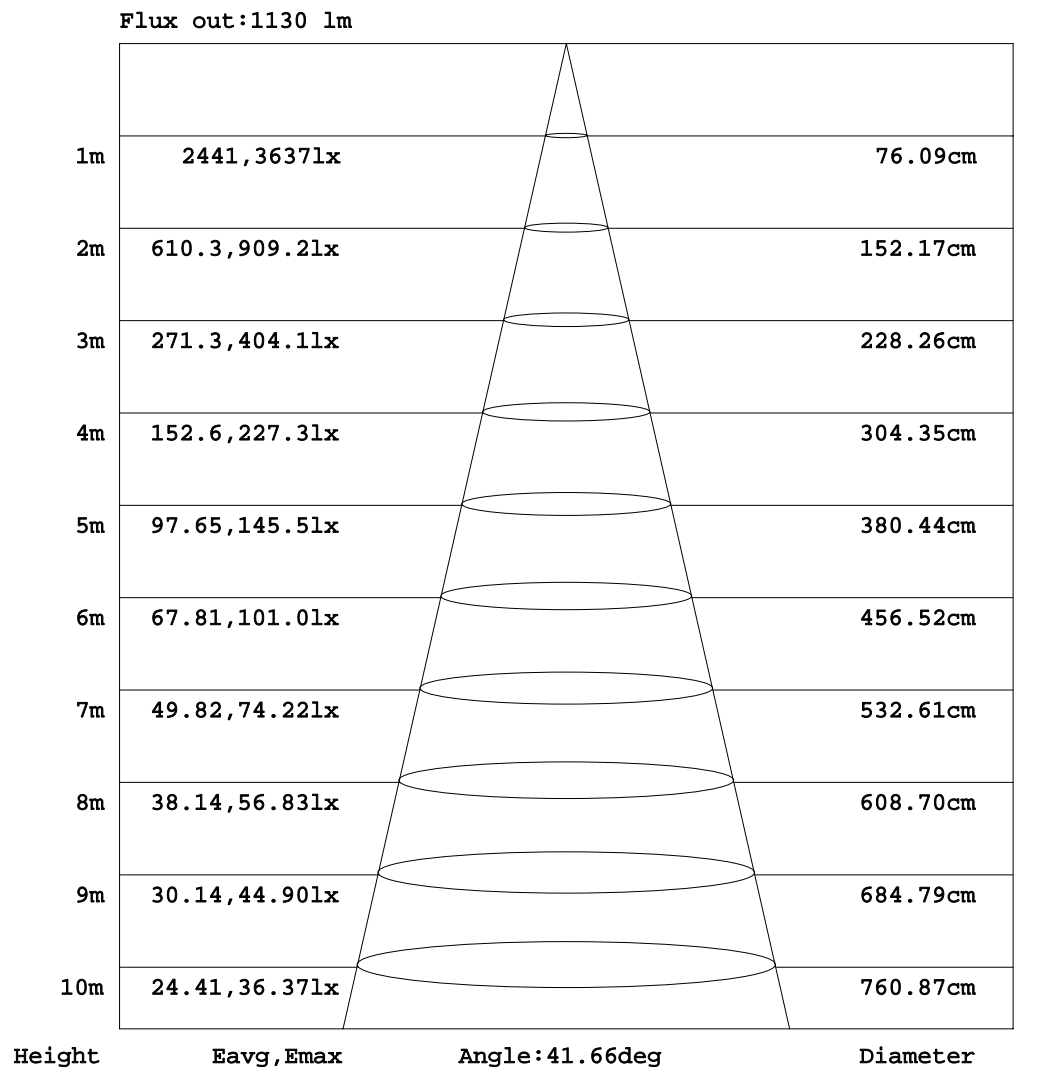


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-06-16

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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:



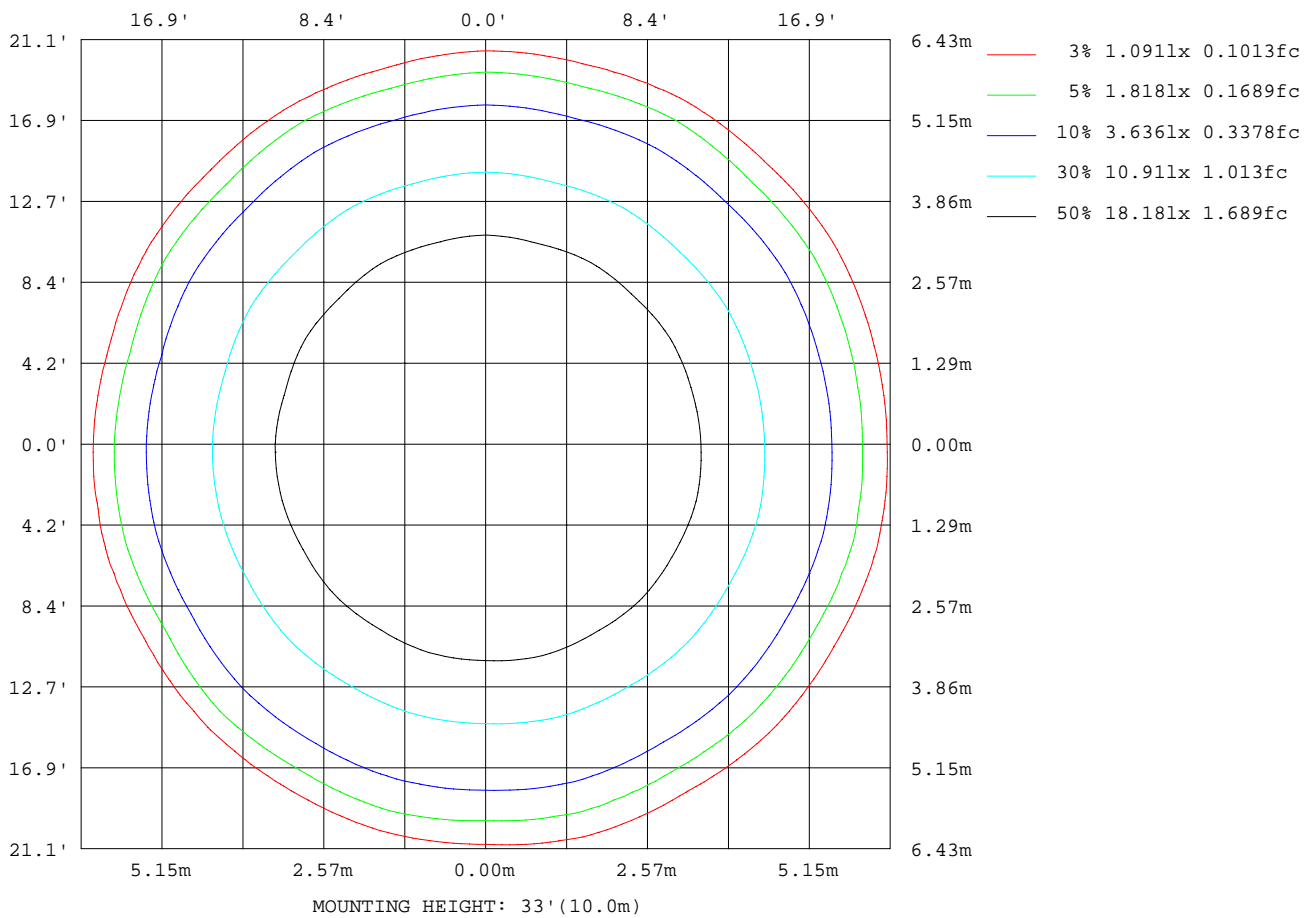
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

ISOLUX DIAGRAM

Test:U:225.1V I:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 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:0.1270A P:27.20W PF:0.9490 Freq:50.00Hz Lamp Flux:1680.3x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:60	Shielding Angle:

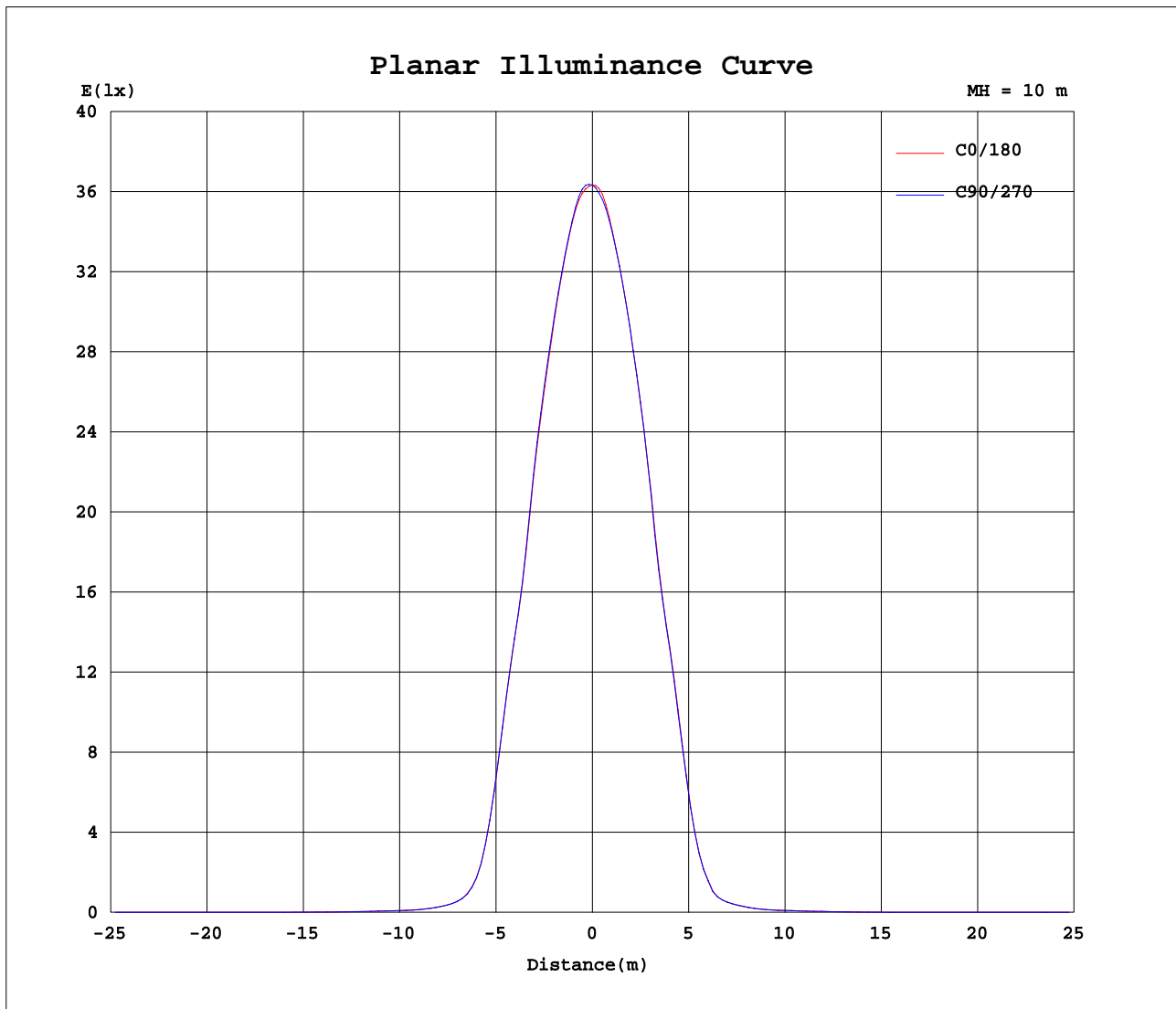
AvgL	cd/m2
L_0~180(65)av	1008
L_0~180(75)av	978
L_0~180(85)av	3158
L_90~270(65)av	958
L_90~270(75)av	962
L_90~270(85)av	3115
L_45(65)av	979
L_45(75)av	989
L_45(85)av	3193

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]
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:

```