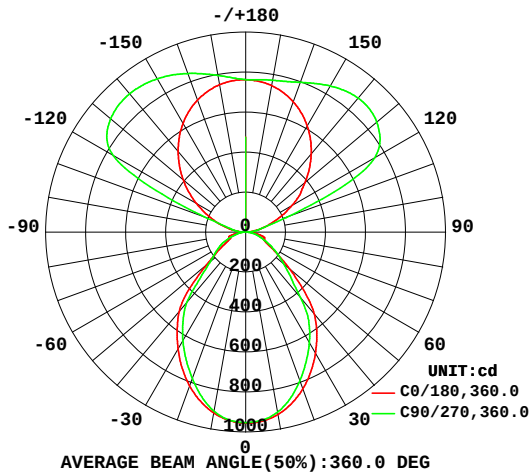


LUMINAIRE PHOTOMETRIC TEST REPORT

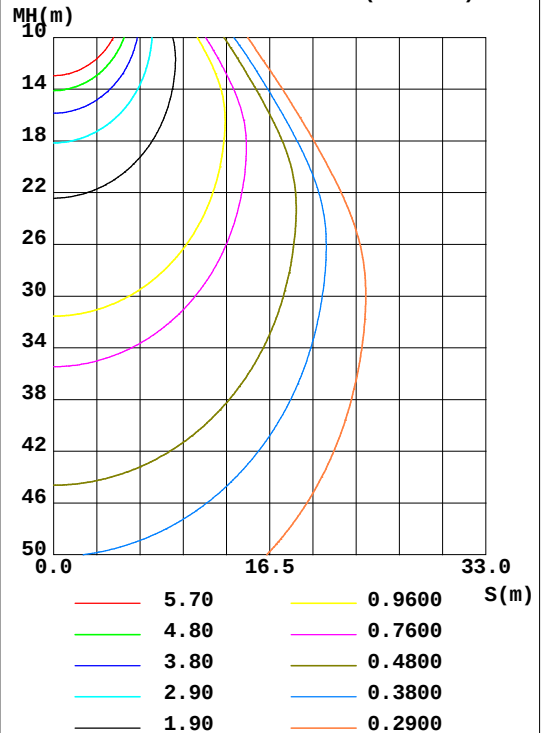
Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 141.87 lm/W			
MODEL		I _{max} (cd)	956.0	S/MH(C0/180)	1.11
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.04
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	4667.6	η UP, DN(C0-180)	32.3,18.2
NOMINAL FLUX(lm)	4667.55	CIE CLASS	SEMI-IND.	η UP, DN(C180-360)	31.4,18.1
LAMPS INSIDE	1	η up(%)	63.7	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220.0	η down(%)	36.3	CIBSE SHR MAX	1.15

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	ϕ zone	ϕ total	%lum, lamp
5	945.9	946.1	943.5	945.9	949.7	945.8	943.9	944.1	0- 5	22.71	22.71	0.49, 0.49
10	918.9	918.2	910.2	919.6	926.9	921.3	915.1	918.2	5- 10	66.70	89.41	1.92, 1.92
15	876.0	868.9	853.0	872.2	888.0	876.6	862.0	871.5	10- 15	106.2	195.6	4.19, 4.19
20	819.6	804.7	780.8	809.5	835.1	816.1	792.1	808.6	15- 20	138.3	333.9	7.15, 7.15
25	752.3	731.5	705.1	738.2	771.6	744.7	715.7	736.0	20- 25	161.8	495.7	10.6, 10.6
30	676.6	654.7	628.8	663.0	698.8	668.9	638.2	659.4	25- 30	176.6	672.4	14.4, 14.4
35	597.9	578.7	547.7	587.1	620.5	587.9	552.3	579.6	30- 35	182.7	855.1	18.3, 18.3
40	517.5	497.0	458.2	502.4	533.8	481.5	426.9	482.9	35- 40	178.8	1034	22.1, 22.1
45	394.3	373.9	318.5	373.8	410.3	353.0	320.9	353.8	40- 45	157.1	1191	25.5, 25.5
50	258.2	255.4	233.4	272.2	287.2	244.5	249.9	237.7	45- 50	123.2	1314	28.2, 28.2
55	176.6	178.2	187.6	192.8	198.6	181.3	198.7	173.7	50- 55	94.15	1408	30.2, 30.2
60	123.4	135.9	154.2	146.8	138.0	140.8	153.7	134.8	55- 60	74.93	1483	31.8, 31.8
65	94.95	111.0	122.4	119.1	104.8	117.6	113.5	112.6	60- 65	61.11	1544	33.1, 33.1
70	86.88	96.50	83.69	100.3	96.37	102.3	81.23	99.16	65- 70	51.87	1596	34.2, 34.2
75	86.07	75.76	52.67	78.64	91.49	76.74	58.89	75.41	70- 75	44.27	1641	35.1, 35.1
80	50.74	44.50	35.62	48.32	60.20	45.86	33.91	42.99	75- 80	32.13	1673	35.8, 35.8
85	25.20	18.23	11.31	20.61	33.42	17.48	9.742	16.58	80- 85	17.00	1690	36.2, 36.2
90	4.074	7.508	4.114	7.848	5.077	7.163	3.913	7.704	85- 90	6.398	1696	36.3, 36.3
95	28.03	40.17	33.93	32.45	19.67	29.36	30.98	40.58	90- 95	10.69	1707	36.6, 36.6
100	65.76	124.5	60.59	92.07	52.38	102.3	59.32	130.9	95-100	30.01	1737	37.2, 37.2
105	112.0	332.4	96.76	272.0	94.75	304.1	98.19	351.2	100-105	79.06	1816	38.9, 38.9
110	166.2	537.9	201.1	484.0	145.7	469.2	214.6	528.8	105-110	151.3	1967	42.1, 42.1
115	219.4	626.3	495.7	578.5	204.7	549.0	521.0	610.0	110-115	214.4	2181	46.7, 46.7
120	282.1	674.6	763.7	625.3	269.0	594.8	745.2	659.3	115-120	264.0	2445	52.4, 52.4
125	346.0	712.1	848.5	660.2	335.4	627.6	820.5	695.7	120-125	284.8	2730	58.5, 58.5
130	408.4	742.4	881.9	688.8	388.9	651.7	856.3	720.7	125-130	286.3	3016	64.6, 64.6
135	468.6	766.1	899.0	711.9	450.9	669.2	874.1	737.0	130-135	279.1	3296	70.6, 70.6
140	526.0	784.1	903.7	731.6	510.3	683.2	875.3	746.6	135-140	265.0	3561	76.3, 76.3
145	579.7	795.8	898.0	746.0	565.9	694.9	864.0	752.2	140-145	245.1	3806	81.5, 81.5
150	628.0	802.1	885.4	755.5	615.4	706.0	844.5	755.2	145-150	220.2	4026	86.3, 86.3
155	669.7	803.7	867.4	761.6	658.7	717.7	820.7	757.2	150-155	191.5	4217	90.4, 90.4
160	703.6	801.8	844.4	766.1	694.6	730.6	797.4	759.6	155-160	159.9	4377	93.8, 93.8
165	730.4	795.6	819.6	768.9	723.8	743.4	780.5	763.2	160-165	126.2	4503	96.5, 96.5
170	749.2	786.3	796.0	769.4	745.0	753.1	771.5	765.7	165-170	91.07	4594	98.4, 98.4
175	759.8	773.7	775.1	765.8	757.6	758.3	765.2	764.6	170-175	54.87	4649	99.6, 99.6
180	762.4	762.4	762.4	762.4	762.4	762.4	762.4	762.4	175-180	18.28	4668	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

Conical surface Flux(90deg): 1191 lm

%lum = 25.5%

%lamp = 25.5%

Conical surface Flux(120deg): 1483.2 lm

%lum = 31.8%

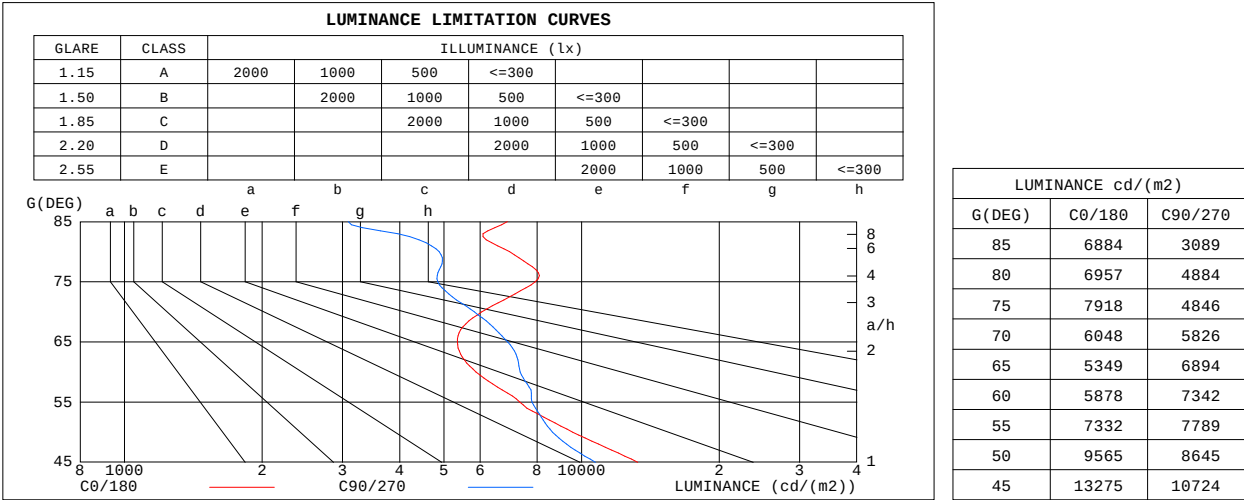
%lamp = 31.8%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.460m [K=1.0571]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



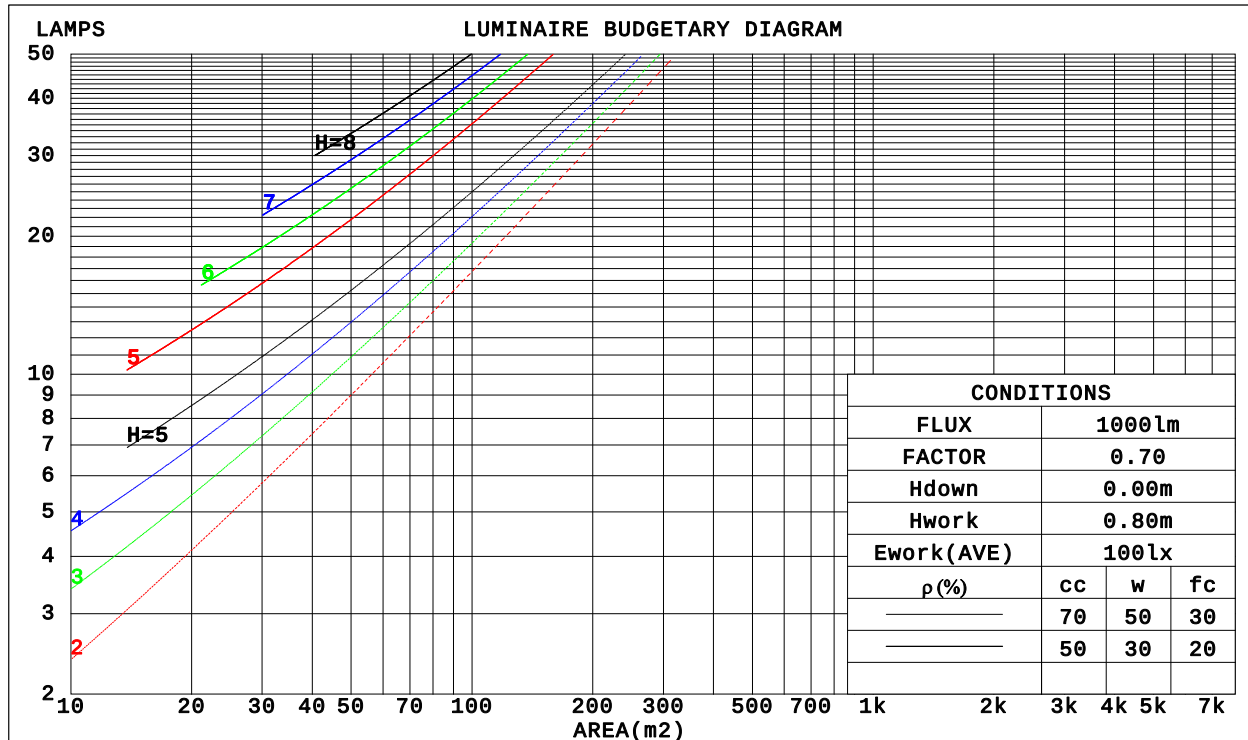
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)										
0.0	1.04	1.04	1.04	.94	.94	.94	.76	.76	.76	.59	.59	.59	.44	.44	.44	.36	
1.0	.91	.88	.84	.83	.80	.77	.67	.65	.63	.53	.51	.50	.39	.38	.38	.32	
2.0	.80	.75	.70	.73	.68	.64	.59	.56	.53	.47	.45	.43	.35	.34	.33	.28	
3.0	.71	.64	.59	.65	.59	.54	.53	.49	.45	.42	.39	.37	.32	.30	.29	.24	
4.0	.63	.56	.50	.58	.52	.47	.48	.43	.39	.38	.35	.32	.29	.27	.25	.21	
5.0	.57	.49	.44	.52	.45	.40	.43	.38	.34	.34	.31	.28	.26	.24	.22	.19	
6.0	.51	.44	.38	.47	.40	.35	.39	.34	.30	.31	.28	.25	.24	.22	.20	.17	
7.0	.46	.39	.34	.43	.36	.31	.35	.30	.27	.29	.25	.22	.22	.20	.18	.15	
8.0	.42	.35	.30	.39	.32	.28	.32	.28	.24	.26	.23	.20	.21	.18	.16	.14	
9.0	.39	.31	.27	.36	.29	.25	.30	.25	.22	.24	.21	.18	.19	.17	.15	.13	
10.0	.35	.29	.24	.33	.27	.23	.27	.23	.20	.23	.19	.17	.18	.16	.14	.12	



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.460m [K=1.0571]
 Remarks:

WEC AND CCEC

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm					
NAME:			TYPE:		
SPEC.:			DIM.:		
MFR.:			SUR.:		
			Shielding Angle:		

ρ_{CC}	80%			70%			50%			30%			10%			0	
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.260	.148	.047	.233	.133	.042	.184	.106	.034	.139	.080	.026	.098	.057	.018		
2.0	.241	.132	.041	.217	.120	.037	.173	.096	.030	.131	.074	.023	.093	.053	.017		
3.0	.223	.119	.036	.202	.108	.033	.161	.087	.026	.123	.067	.021	.088	.049	.015		
4.0	.207	.108	.032	.188	.098	.029	.150	.079	.024	.115	.062	.019	.082	.045	.014		
5.0	.193	.098	.029	.175	.090	.026	.140	.073	.021	.108	.057	.017	.077	.041	.012		
6.0	.180	.090	.026	.163	.083	.024	.131	.067	.020	.101	.053	.015	.073	.038	.011		
7.0	.169	.084	.024	.153	.076	.022	.123	.062	.018	.095	.049	.014	.069	.036	.011		
8.0	.159	.078	.022	.144	.071	.020	.116	.058	.017	.090	.046	.013	.065	.033	.010		
9.0	.149	.072	.020	.136	.066	.019	.110	.054	.015	.085	.043	.012	.062	.031	.009		
10.0	.141	.068	.019	.128	.062	.017	.104	.051	.014	.081	.040	.011	.059	.030	.008		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.676	.676	.676	.577	.577	.577	.394	.394	.394	.226	.226	.226	.072	.072	.072	
1.0	.666	.646	.627	.570	.554	.540	.390	.381	.373	.224	.221	.217	.072	.071	.070	
2.0	.658	.624	.596	.563	.538	.516	.386	.372	.360	.223	.216	.211	.071	.070	.069	
3.0	.650	.609	.576	.558	.525	.499	.383	.365	.350	.221	.213	.206	.071	.069	.068	
4.0	.644	.597	.562	.552	.516	.488	.380	.360	.344	.220	.211	.203	.071	.069	.067	
5.0	.637	.588	.552	.547	.509	.480	.377	.355	.339	.218	.209	.201	.070	.068	.066	
6.0	.631	.581	.544	.543	.503	.474	.374	.352	.335	.217	.207	.199	.070	.068	.066	
7.0	.626	.575	.539	.538	.498	.470	.372	.349	.333	.216	.206	.198	.070	.067	.066	
8.0	.620	.570	.535	.534	.494	.466	.370	.347	.331	.215	.205	.197	.070	.067	.065	
9.0	.615	.565	.532	.530	.491	.464	.367	.345	.329	.214	.204	.196	.069	.067	.065	
10.0	.611	.562	.529	.526	.488	.462	.365	.343	.328	.213	.203	.196	.069	.067	.065	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:			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	14.5	15.3	15.5	16.3	17.5	14.5	15.3	15.5	16.3	17.6	
	3H	15.3	16.0	16.3	17.0	18.3	15.4	16.1	16.4	17.1	18.4
	4H	16.0	16.7	17.0	17.7	19.0	15.7	16.3	16.7	17.3	18.7
	6H	16.5	17.1	17.6	18.2	19.5	15.9	16.5	16.9	17.5	18.8
	8H	16.7	17.2	17.7	18.3	19.6	15.9	16.5	16.9	17.5	18.9
	12H	16.7	17.3	17.8	18.3	19.7	15.9	16.4	16.9	17.5	18.8
4H	2H	14.6	15.2	15.6	16.2	17.6	14.6	15.3	15.6	16.3	17.6
	3H	15.7	16.2	16.7	17.3	18.7	15.7	16.3	16.8	17.3	18.7
	4H	16.6	17.1	17.7	18.1	19.5	16.1	16.6	17.2	17.7	19.1
	6H	17.3	17.7	18.3	18.8	20.2	16.5	16.9	17.5	17.9	19.4
	8H	17.4	17.8	18.5	18.9	20.3	16.5	16.9	17.6	18.0	19.5
	12H	17.6	17.9	18.7	19.0	20.5	16.5	16.9	17.6	18.0	19.4
8H	4H	16.7	17.1	17.8	18.2	19.6	16.3	16.7	17.4	17.8	19.2
	6H	17.5	17.8	18.6	18.9	20.4	16.8	17.1	17.9	18.2	19.7
	8H	17.8	18.0	18.9	19.1	20.6	16.9	17.2	18.0	18.3	19.8
	12H	18.0	18.2	19.1	19.3	20.8	16.9	17.2	18.1	18.3	19.8
12H	4H	16.7	17.0	17.8	18.1	19.6	16.3	16.6	17.4	17.7	19.2
	6H	17.5	17.8	18.6	18.9	20.4	16.8	17.1	17.9	18.2	19.7
	8H	17.8	18.0	18.9	19.1	20.6	17.0	17.2	18.1	18.3	19.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.4					+ 0.5 / - 0.5					
1.5H	+ 0.3 / - 0.3					+ 0.4 / - 0.5					
2.0H	+ 1.0 / - 0.6					+ 0.7 / - 0.3					

CIE Pub.117 Corrected 4668 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.4)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

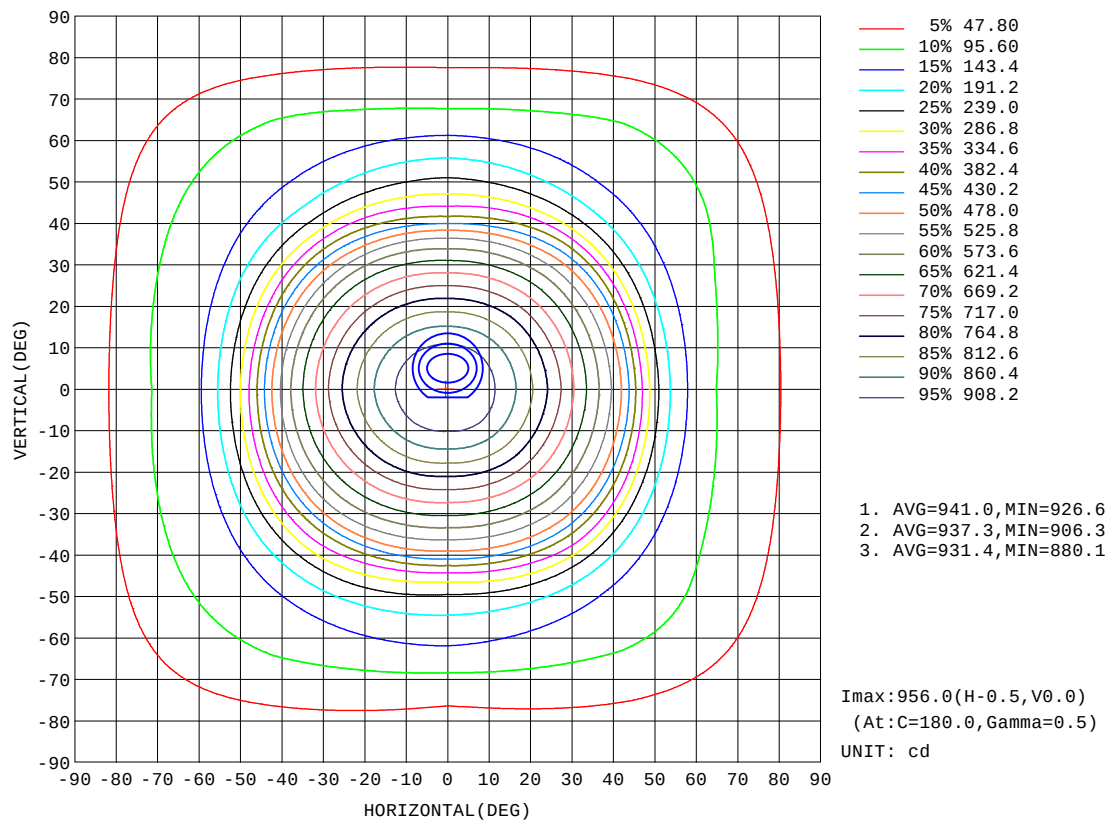
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	54	43	36	49	39	33	40	33	29	16
0.80	62	51	44	57	47	41	46	39	35	19
1.00	69	58	51	62	54	47	51	44	40	21
1.25	75	65	58	68	59	53	55	49	45	23
1.50	79	70	63	71	64	58	58	53	49	25
2.00	85	77	71	77	70	65	62	58	54	28
2.50	88	81	76	80	74	70	64	61	57	29
3.00	90	85	80	82	77	73	66	63	60	30
4.00	94	89	85	85	81	77	68	66	63	31
5.00	96	92	88	86	83	80	70	68	66	32
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.00		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

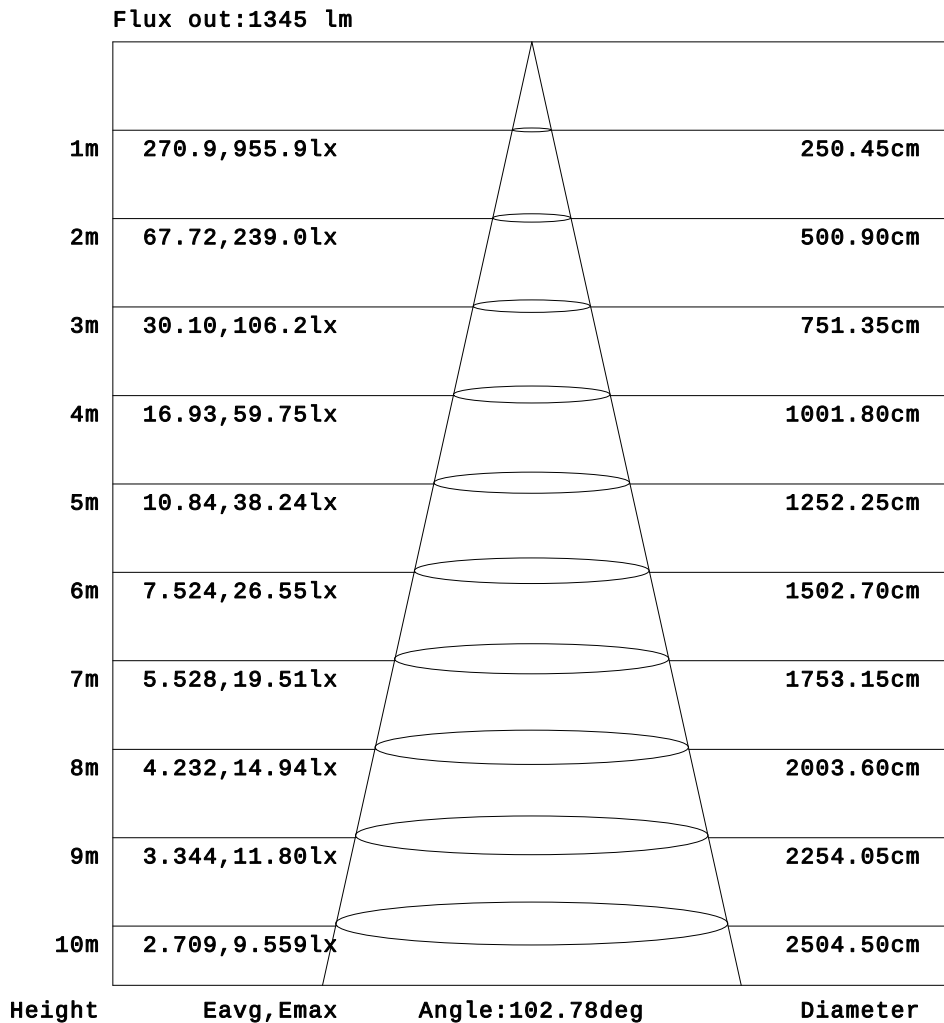


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.460m [K=1.0571]
Remarks:

AAI Figure

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



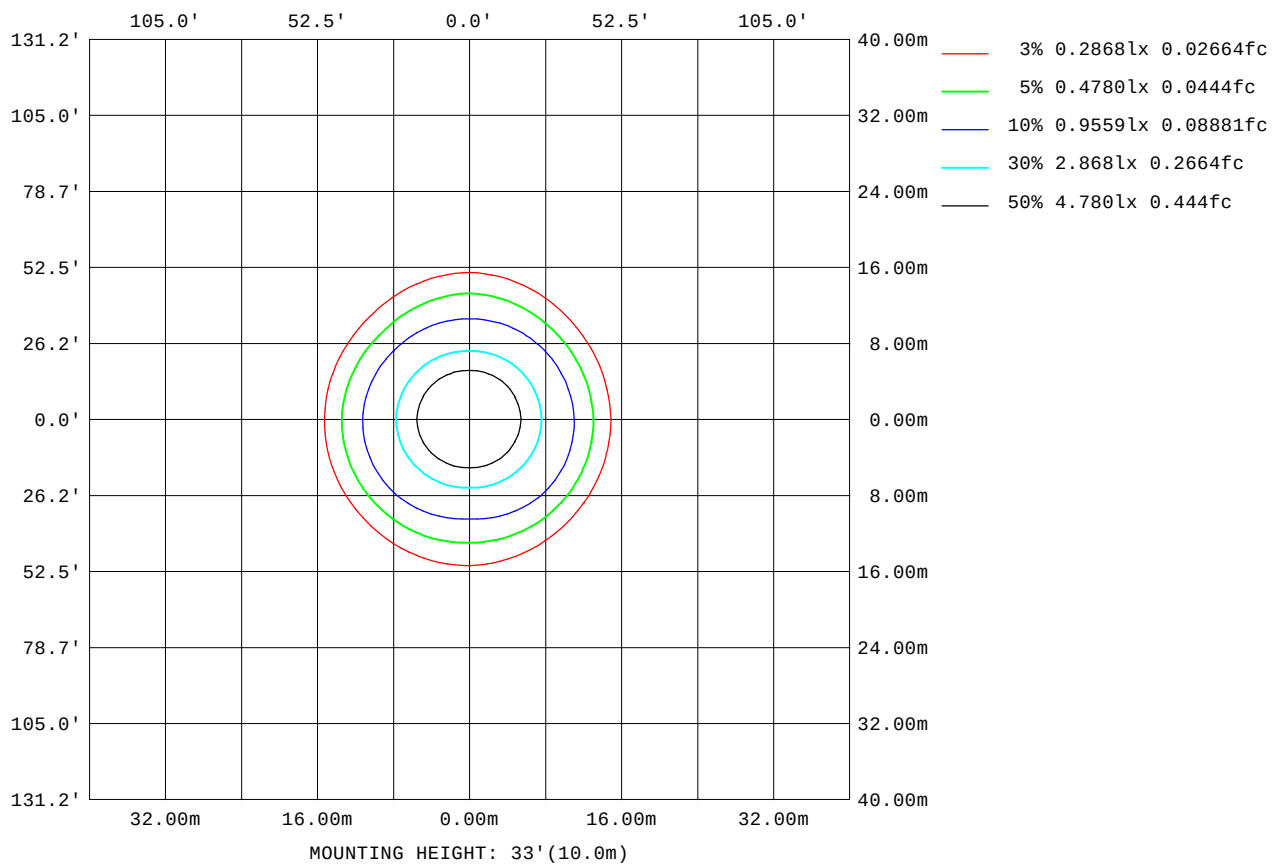
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.460m [K=1.0571]
 Remarks:

LED Avg.L Report

Test:U:220.0V I:0.1530A P:32.90W PF:0.9770 Lamp Flux:4667.55x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

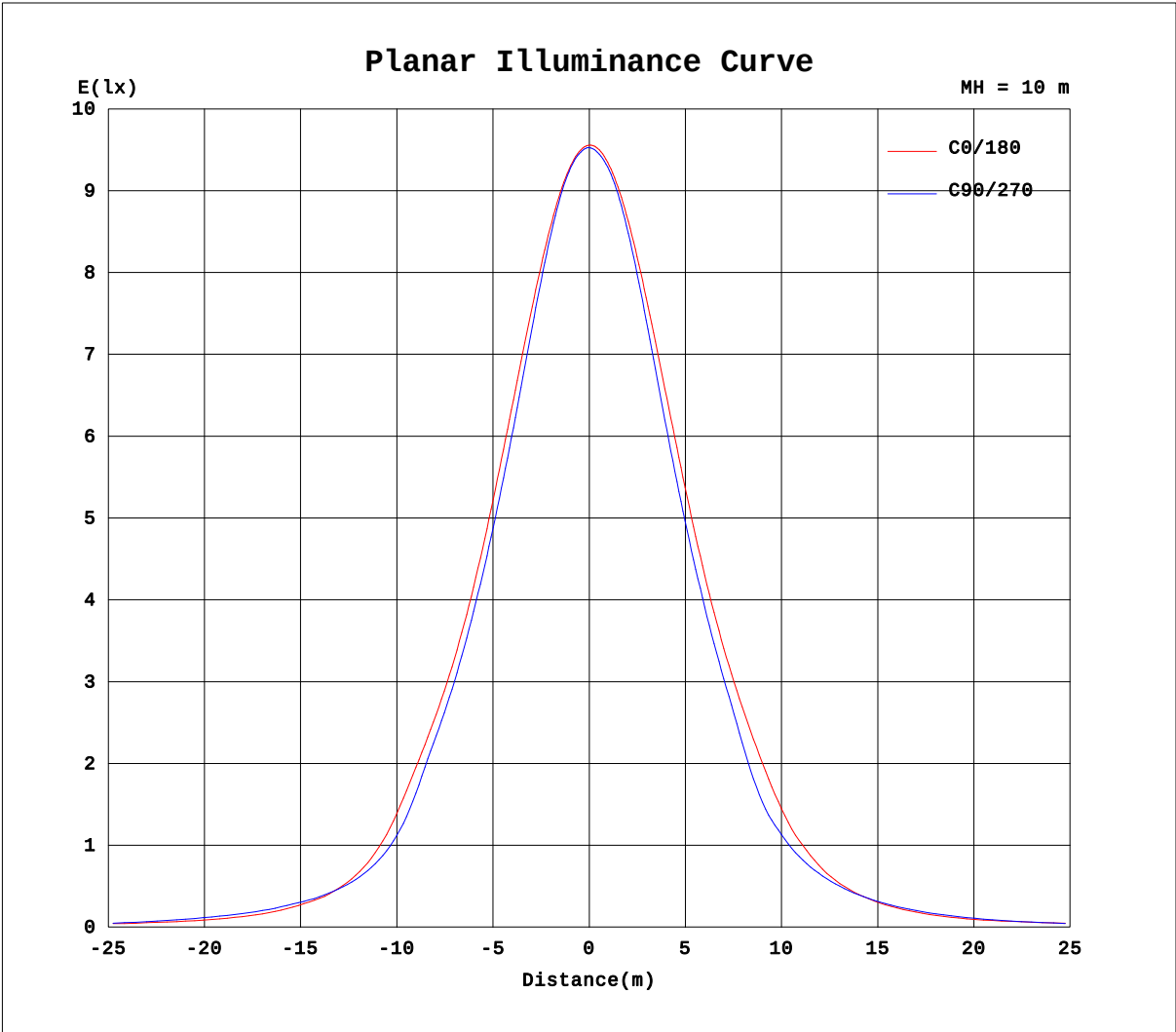
AvgL	cd/m2
L_0~180(65)av	5627
L_0~180(75)av	8167
L_0~180(85)av	8007
L_90~270(65)av	6646
L_90~270(75)av	5132
L_90~270(85)av	2875
L_45(65)av	6485
L_45(75)av	7050
L_45(85)av	4979

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks: