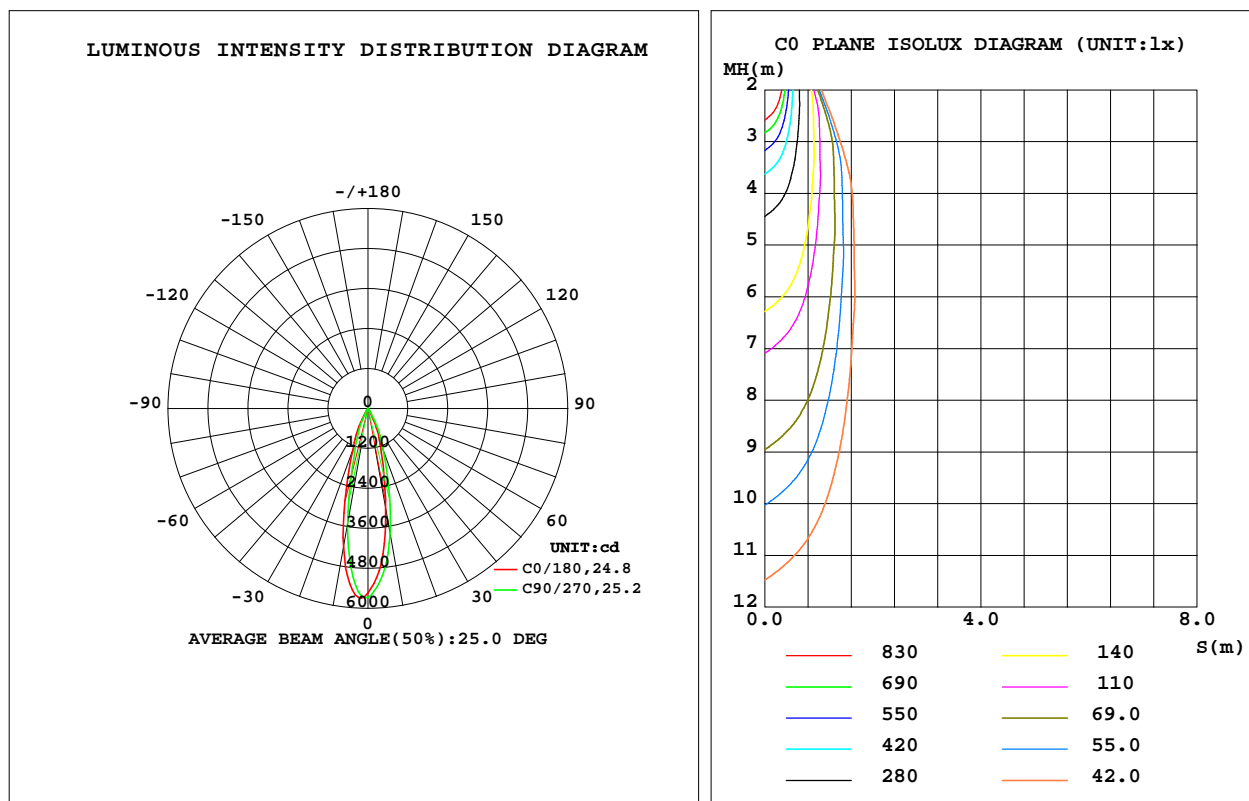


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 95.91 lm/W			
MODEL	LLS-M60GEXBX0600	I <sub>max</sub> (cd)	5702	S/MH(C0/180)	0.37
NOMINAL POWER(W)	12.5	LOR(%)	100.0	S/MH(C90/270)	0.40
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1411.0	h UP,DN(C0-180)	0.7,50.9
NOMINAL FLUX(lm)	1410.98	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.6,47.8
LAMPS INSIDE	1	h up(%)	1.2	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	220	h down(%)	98.8	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

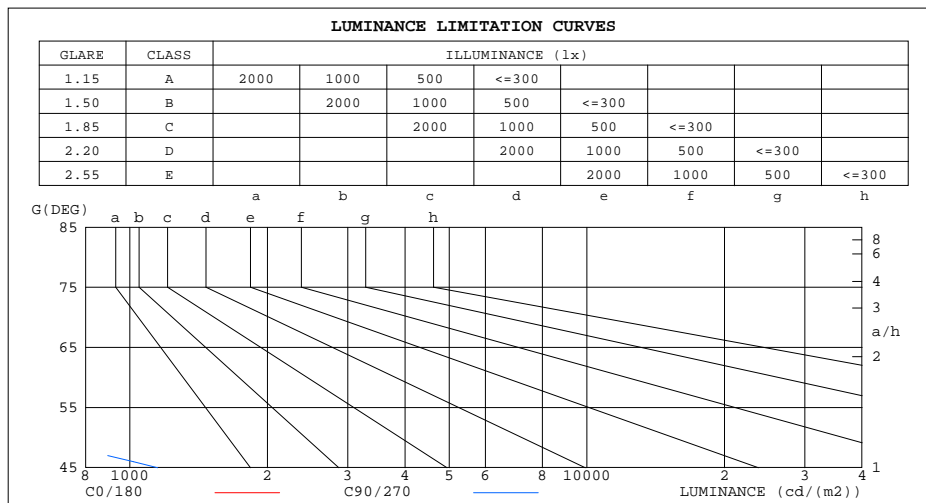
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	3091	3607	3830	4001	4240	3700	3542	3398	0- 10	438.6	438.6	31.1,31.1
20	1029	1261	1364	1373	1369	1069	1007	1017	10- 20	594.7	1033	73.2,73.2
30	138.4	217.2	265.6	251.9	249.9	155.1	120.9	137.6	20- 30	291.9	1325	93.9,93.9
40	28.75	43.26	44.72	44.24	25.39	26.28	23.92	25.27	30- 40	47.71	1373	97.3,97.3
50	5.922	9.955	11.04	11.37	8.495	8.427	7.464	8.066	40- 50	14.72	1388	98.4,98.4
60	1.557	2.532	3.140	2.717	2.217	2.359	2.397	2.400	50- 60	4.233	1392	98.7,98.7
70	0.1605	0.3425	0.8421	0.5323	0.2103	0.4662	0.4208	0.3394	60- 70	1.285	1393	98.7,98.7
80	0.0675	0.1201	0.5148	0.1144	0.1067	0.1538	0.2850	0.1737	70- 80	0.2763	1393	98.8,98.8
90	0.0200	0.0334	0.1562	0.0135	0.0267	0.0604	0.1587	0.0601	80- 90	0.1482	1394	98.8,98.8
100	0.0200	0.0401	0.0336	0.0200	0.0267	0.0468	0.0334	0.0401	90-100	0.0506	1394	98.8,98.8
110	0.0200	0.0602	0.0267	0.0402	0.0401	0.0401	0.0539	0.0401	100-110	0.0378	1394	98.8,98.8
120	0.1177	0.1204	0.1065	0.1003	0.0738	0.1059	0.1405	0.1129	110-120	0.0673	1394	98.8,98.8
130	0.3731	0.3681	0.2863	0.2940	0.2350	0.2805	0.4221	0.3138	120-130	0.1637	1394	98.8,98.8
140	1.488	1.245	1.088	1.049	0.8175	1.068	1.229	1.172	130-140	0.5005	1394	98.8,98.8
150	6.803	4.816	4.163	3.773	3.384	4.213	4.395	5.005	140-150	1.469	1396	98.9,98.9
160	20.33	16.43	15.30	13.41	11.99	13.68	12.63	13.99	150-160	4.053	1400	99.2,99.2
170	50.62	37.36	34.90	36.02	33.73	35.94	35.45	32.18	160-170	6.664	1407	99.7,99.7
180	53.42	57.08	59.43	58.86	53.52	57.16	59.40	58.84	170-180	4.332	1411	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-09-15

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	13	146
80	13	99
75	14	87
70	16	82
65	19	147
60	104	209
55	168	308
50	307	572
45	630	1151

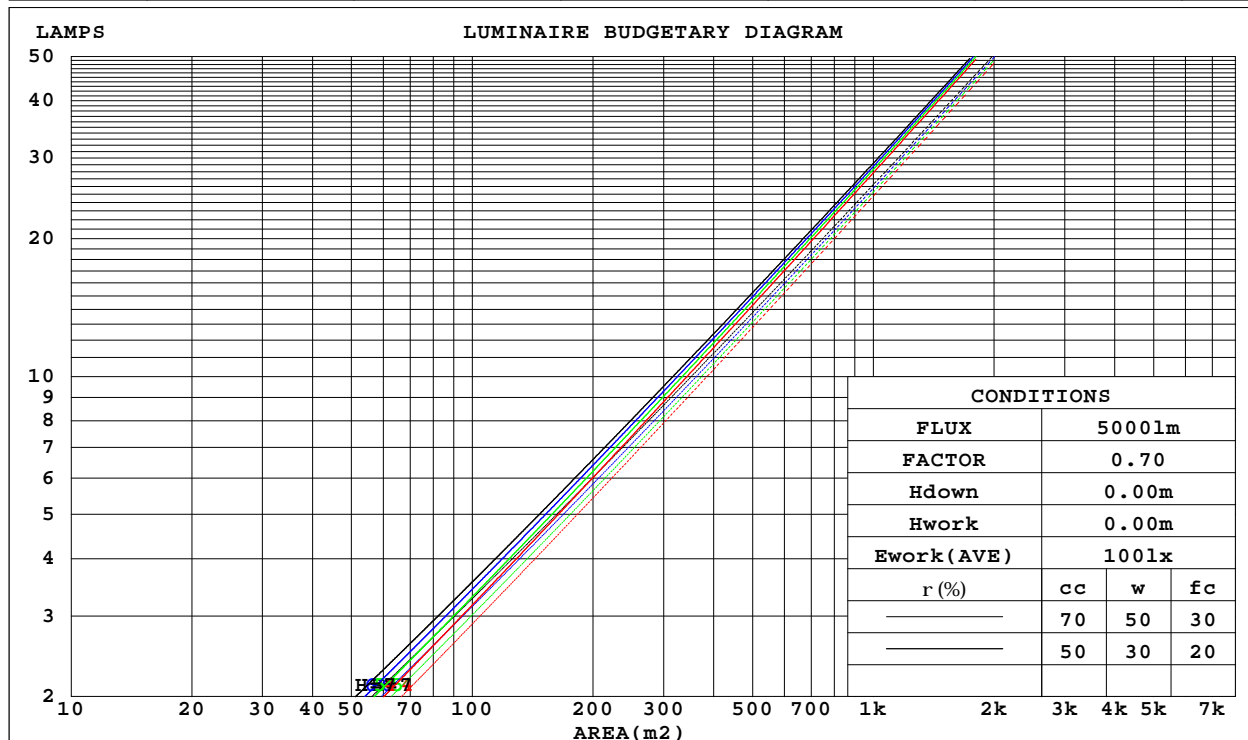
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-09-15

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

WEC AND CCEC

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0														
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
rfc	20%			20%			20%			20%			20%			0														
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.142	.081	.026	.135	.077	.024	.122	.070	.022	.110	.063	.020	.099	.057	.018															
2.0	.132	.072	.022	.126	.070	.021	.116	.064	.020	.106	.059	.019	.096	.054	.017															
3.0	.124	.066	.020	.119	.064	.019	.110	.059	.018	.101	.055	.017	.093	.052	.016															
4.0	.116	.060	.018	.112	.059	.017	.104	.055	.017	.097	.052	.016	.090	.049	.015															
5.0	.110	.056	.016	.106	.055	.016	.099	.052	.015	.093	.049	.015	.087	.047	.014															
6.0	.104	.052	.015	.101	.051	.015	.095	.049	.014	.090	.047	.014	.085	.044	.013															
7.0	.099	.049	.014	.096	.048	.014	.091	.046	.013	.086	.044	.013	.082	.043	.012															
8.0	.094	.046	.013	.092	.045	.013	.088	.044	.012	.083	.042	.012	.079	.041	.012															
9.0	.090	.044	.012	.088	.043	.012	.084	.042	.012	.080	.040	.012	.077	.039	.011															
10.0	.087	.042	.012	.085	.041	.011	.081	.040	.011	.078	.039	.011	.074	.037	.011															

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.200	.200	.200	.171	.171	.171	.117	.117	.117	.067	.067	.067	.021	.021	.021	
1.0	.178	.167	.157	.152	.143	.135	.104	.099	.093	.060	.057	.054	.019	.018	.018	
2.0	.160	.142	.127	.137	.122	.110	.094	.085	.076	.054	.049	.045	.017	.016	.015	
3.0	.146	.123	.105	.125	.106	.091	.086	.074	.064	.050	.043	.037	.016	.014	.012	
4.0	.134	.108	.088	.115	.093	.076	.079	.065	.054	.046	.038	.032	.015	.012	.010	
5.0	.123	.095	.075	.106	.083	.065	.073	.058	.046	.042	.034	.027	.014	.011	.009	
6.0	.115	.086	.065	.099	.074	.056	.068	.052	.040	.039	.031	.024	.013	.010	.008	
7.0	.107	.077	.057	.092	.067	.049	.064	.047	.035	.037	.028	.021	.012	.009	.007	
8.0	.101	.071	.050	.087	.061	.044	.060	.043	.031	.035	.025	.018	.011	.008	.006	
9.0	.096	.065	.045	.082	.057	.039	.057	.040	.028	.033	.024	.017	.011	.008	.005	
10.0	.091	.061	.040	.078	.053	.035	.054	.037	.025	.032	.022	.015	.010	.007	.005	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm											
NAME: LLS-M60GEXBX0600						TYPE:		WEIGHT:			
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC						DIM.: 600*50*45mm		SERIAL No.:			
MFR.: COLORS						SUR.:600*50mm		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	0.1	0.8	0.3	0.9	1.1	2.0	2.7	2.2	2.9	3.0	
	3H	-0.1	0.6	0.2	0.8	1.0	1.9	2.5	2.1	2.7	2.9
	4H	-0.2	0.4	0.1	0.7	0.9	1.8	2.4	2.1	2.6	2.9
	6H	-0.2	0.3	0.1	0.6	0.8	1.7	2.3	2.0	2.6	2.8
	8H	-0.3	0.3	0.0	0.5	0.8	1.7	2.3	2.0	2.5	2.8
	12H	-0.3	0.2	-0.0	0.5	0.8	1.7	2.2	2.0	2.5	2.8
4H	2H	-0.1	0.5	0.2	0.7	1.0	1.8	2.4	2.1	2.6	2.9
	3H	-0.3	0.2	0.0	0.5	0.8	1.7	2.2	2.0	2.5	2.8
	4H	-0.4	0.1	-0.0	0.4	0.7	1.6	2.1	1.9	2.4	2.7
	6H	-0.5	-0.1	-0.1	0.3	0.7	1.5	1.9	1.9	2.3	2.6
	8H	-0.5	-0.1	-0.1	0.2	0.6	1.5	1.9	1.9	2.2	2.6
	12H	-0.6	-0.2	-0.2	0.2	0.6	1.4	1.8	1.8	2.2	2.6
8H	4H	-0.5	-0.1	-0.1	0.2	0.6	1.4	1.8	1.8	2.2	2.6
	6H	-0.6	-0.3	-0.2	0.1	0.5	1.3	1.7	1.8	2.1	2.5
	8H	-0.7	-0.4	-0.2	0.0	0.5	1.3	1.6	1.8	2.0	2.5
	12H	-0.8	-0.5	-0.3	-0.1	0.4	1.3	1.5	1.7	2.0	2.5
12H	4H	-0.6	-0.2	-0.2	0.2	0.6	1.4	1.7	1.8	2.1	2.5
	6H	-0.7	-0.4	-0.2	0.0	0.5	1.3	1.6	1.7	2.0	2.5
	8H	-0.8	-0.5	-0.3	-0.1	0.4	1.2	1.5	1.7	1.9	2.4
Variations with the observer position at spacings:											
S = 1.0H	+ 2.6 / - 9.3					+ 3.0 / - 7.6					
1.5H	+ 4.0 / - 6.4					+ 4.7 / - 6.6					
2.0H	+ 5.2 / - 6.4					+ 5.8 / - 5.1					

CIE Pub.117, 1411 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.2)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:

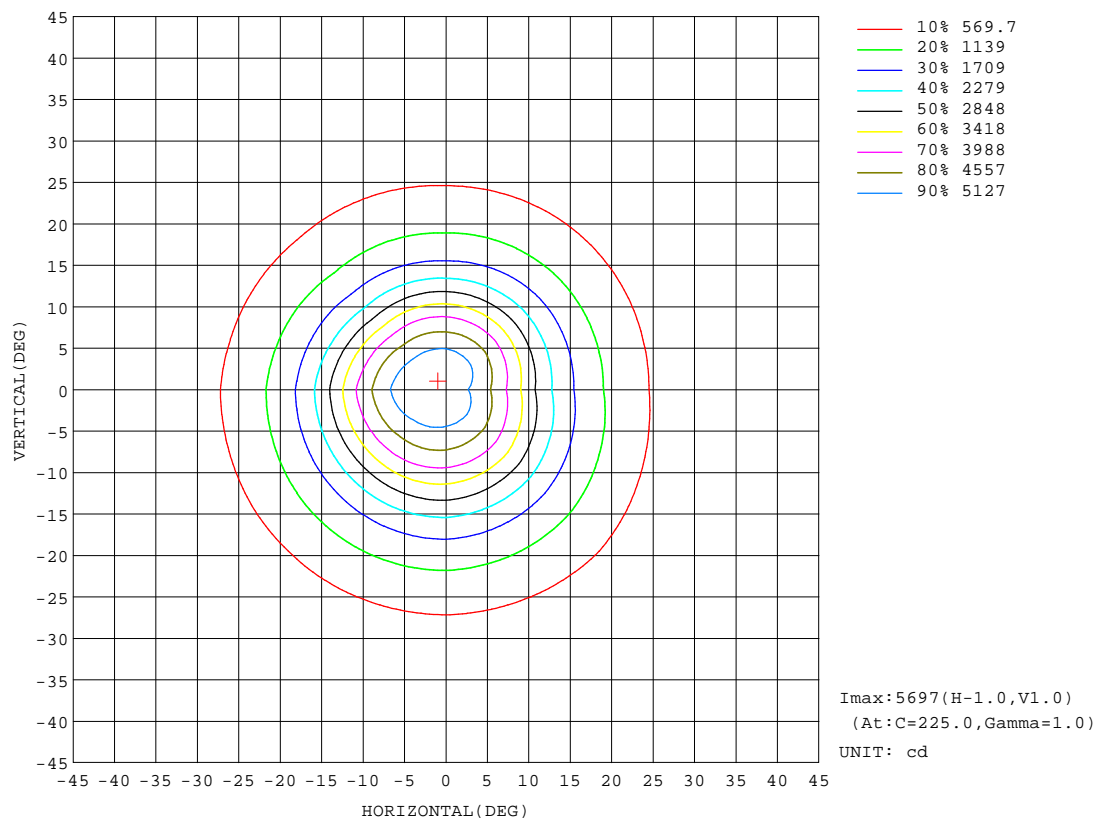
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	89	84	81	89	83	80	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	92	100	95	92	98	95	91	88
1.25	104	100	97	103	99	96	101	98	95	91
1.50	107	103	100	106	102	99	103	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	106	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: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-09-15

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

### ISOCANDELA DIAGRAM

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

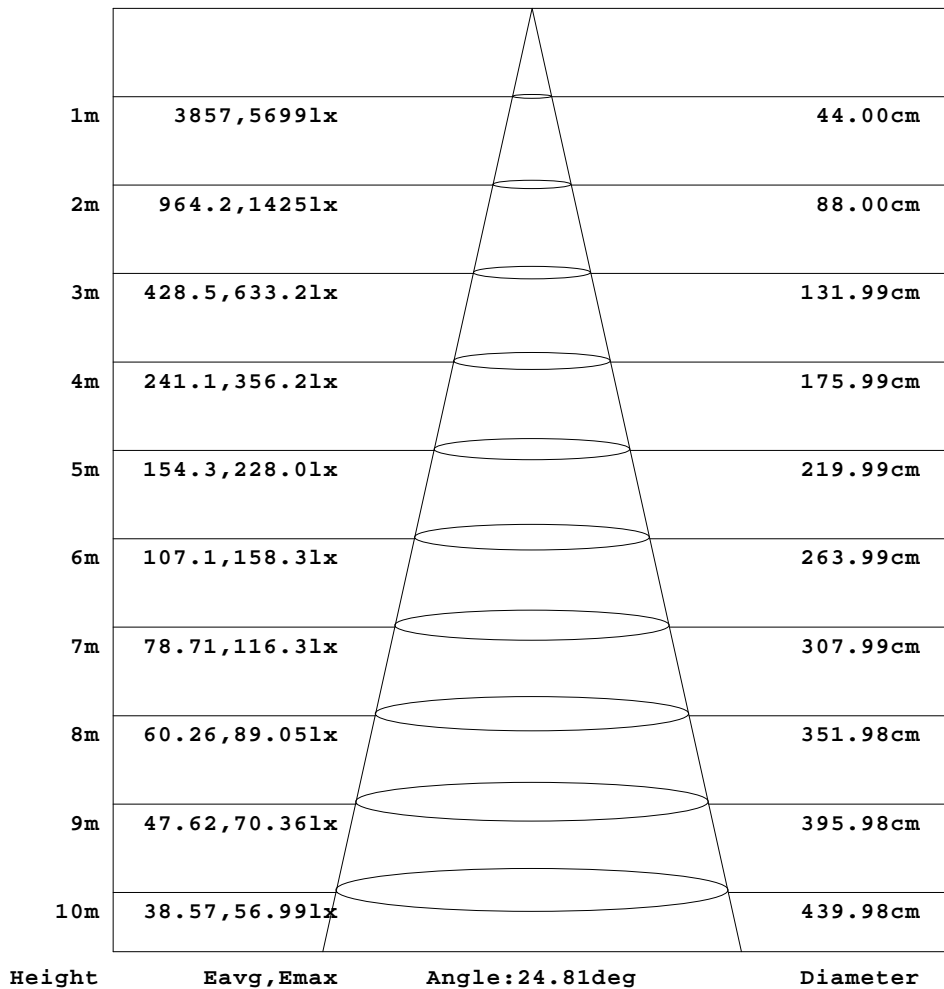
deg Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:

Flux out:645.8 lm



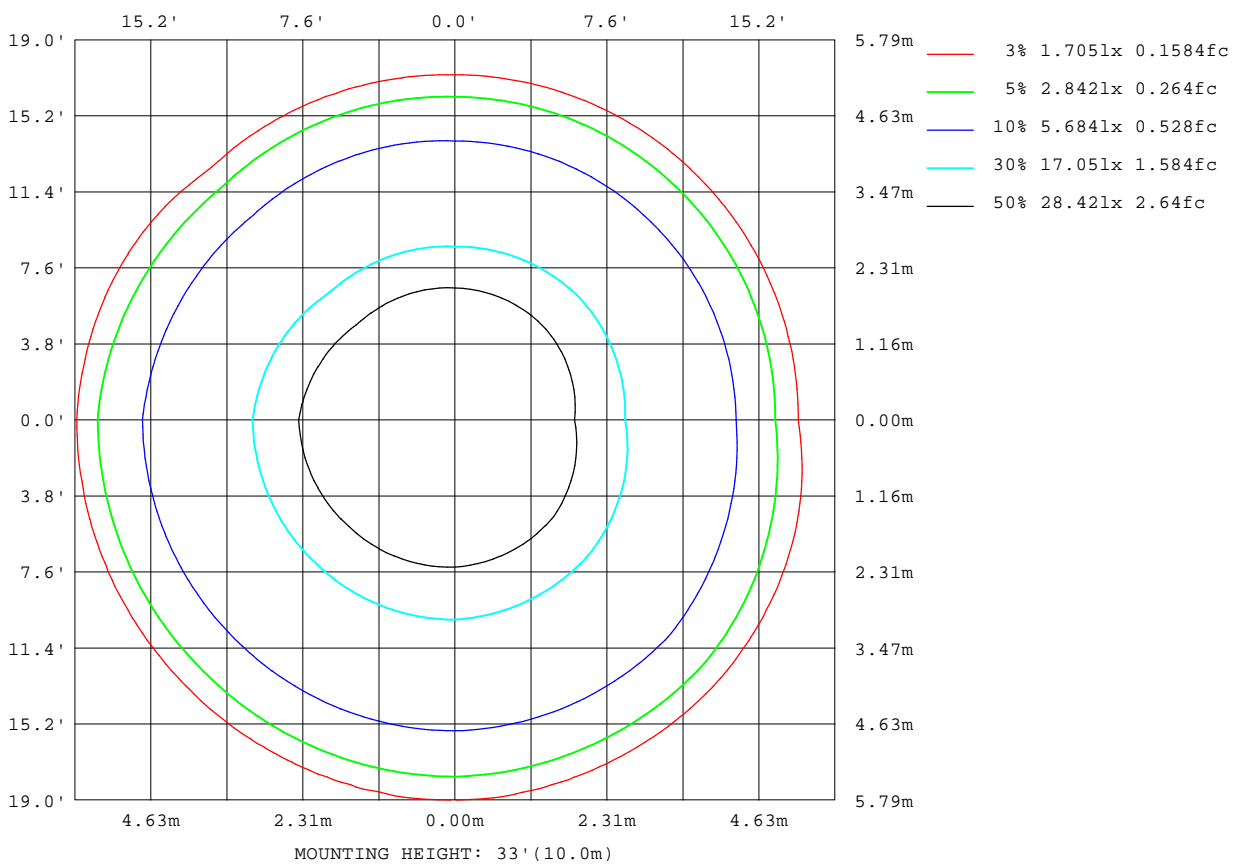
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

g Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

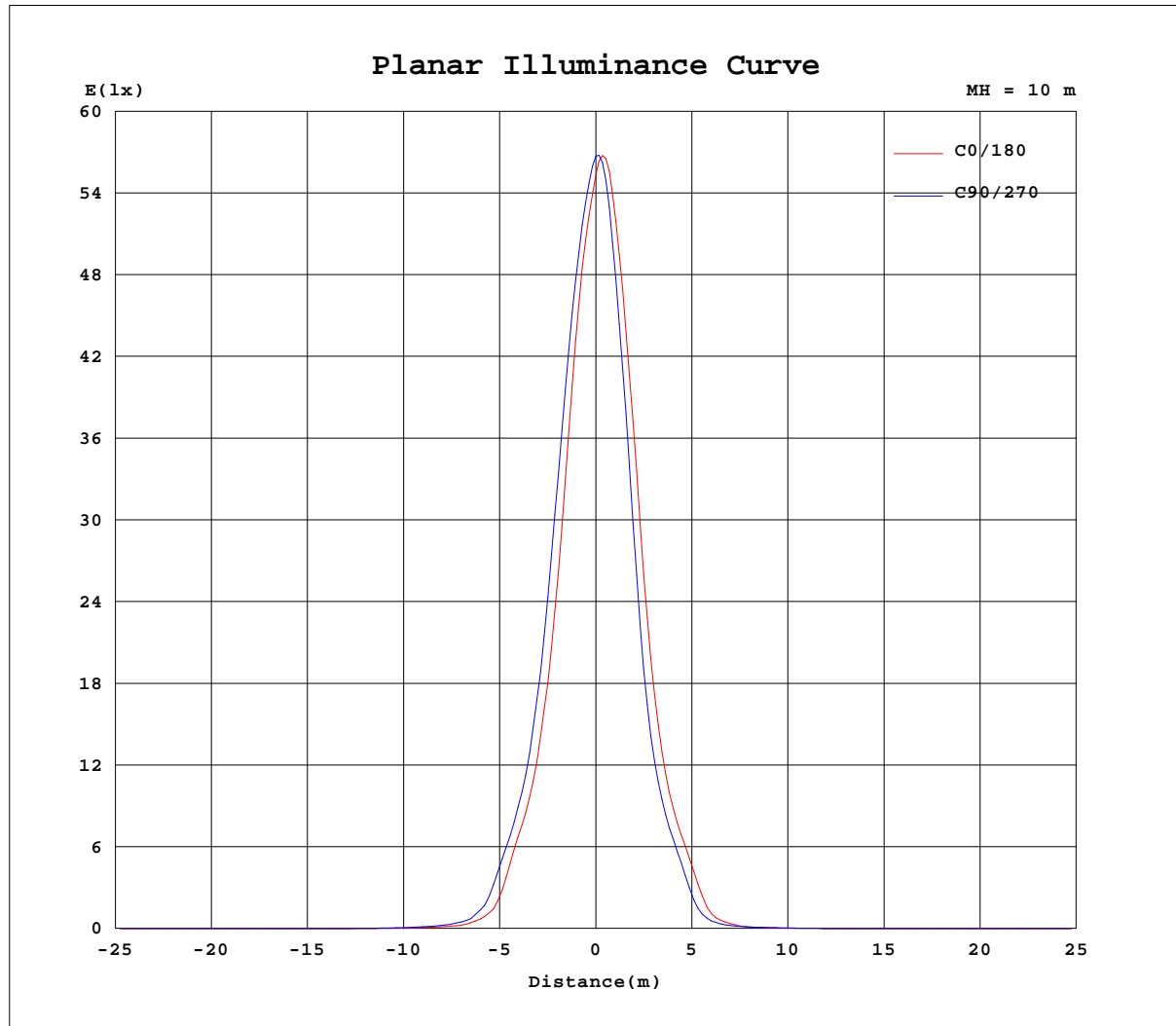
Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2020-09-15

deg Range: 0 - 180DEG  
deg Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.8V I:0.0707A P:14.71W PF:0.9430 Freq:49.99Hz Lamp Flux:1410.98x1 lm		
NAME: LLS-M60GEXBX0600	TYPE:	WEIGHT:
SPEC.:LLS-M60GEXBX0600-T15NW8B-DC	DIM.: 600*50*45mm	SERIAL No.:
MFR.: COLORS	SUR.:600*50mm	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	5534	5645	5672	5648	5534	5645	5672	5648										
5	4655	4915	5032	5185	5463	5215	5103	4957										
10	3091	3607	3830	4001	4240	3700	3542	3398										
15	1791	2185	2388	2429	2532	1940	1824	1863										
20	1029	1261	1364	1373	1369	1069	1007	1017										
25	507	746	802	801	815	595	524	511										
30	138	217	266	252	250	155	121	138										
35	47.9	84.4	90.8	86.8	69.7	47.0	43.4	44.7										
40	28.8	43.3	44.7	44.2	25.4	26.3	23.9	25.3										
45	13.4	23.5	24.4	25.5	16.3	16.3	14.5	15.2										
50	5.92	9.96	11.0	11.4	8.50	8.43	7.46	8.07										
55	2.88	4.67	5.31	5.14	4.35	4.25	4.07	4.20										
60	1.56	2.53	3.14	2.72	2.22	2.36	2.40	2.40										
65	0.23	1.44	1.86	1.50	1.16	1.39	1.32	1.40										
70	0.16	0.34	0.84	0.53	0.21	0.47	0.42	0.34										
75	0.11	0.17	0.67	0.17	0.16	0.17	0.35	0.24										
80	0.07	0.12	0.51	0.11	0.11	0.15	0.29	0.17										
85	0.03	0.11	0.38	0.10	0.03	0.11	0.23	0.11										
90	0.02	0.03	0.16	0.01	0.03	0.06	0.16	0.06										
95	0.02	0.03	0.11	0.02	0.03	0.05	0.09	0.04										
100	0.02	0.04	0.03	0.02	0.03	0.05	0.03	0.04										
105	0.02	0.05	0.03	0.03	0.03	0.05	0.05	0.04										
110	0.02	0.06	0.03	0.04	0.04	0.04	0.05	0.04										
115	0.03	0.08	0.03	0.05	0.05	0.09	0.09	0.09										
120	0.12	0.12	0.11	0.10	0.07	0.11	0.14	0.11										
125	0.17	0.19	0.11	0.16	0.13	0.13	0.24	0.16										
130	0.37	0.37	0.29	0.29	0.24	0.28	0.42	0.31										
135	0.75	0.69	0.59	0.57	0.44	0.59	0.72	0.62										
140	1.49	1.25	1.09	1.05	0.82	1.07	1.23	1.17										
145	3.03	2.27	1.99	1.93	1.60	2.02	2.20	2.33										
150	6.80	4.82	4.16	3.77	3.38	4.21	4.40	5.00										
155	11.9	9.96	9.06	7.58	6.85	7.98	8.02	8.89										
160	20.3	16.4	15.3	13.4	12.0	13.7	12.6	14.0										
165	34.5	26.1	23.6	22.8	20.6	22.8	20.9	21.5										
170	50.6	37.4	34.9	36.0	33.7	35.9	35.5	32.2										
175	54.6	48.9	49.6	49.5	45.9	49.5	51.0	47.6										
180	53.4	57.1	59.4	58.9	53.5	57.2	59.4	58.8										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-09-15

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks: