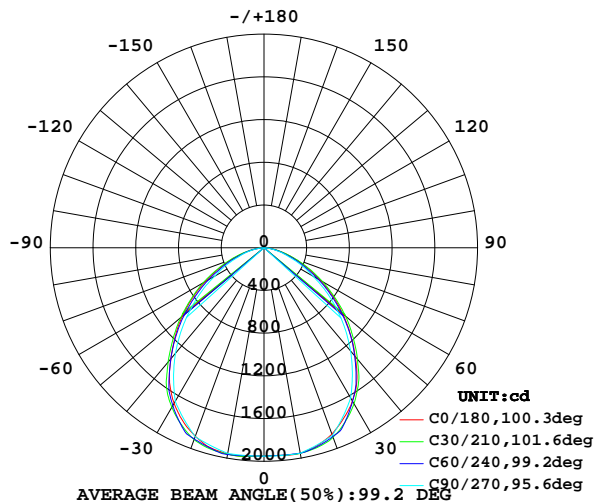


LUMINAIRE PHOTOMETRIC TEST REPORT

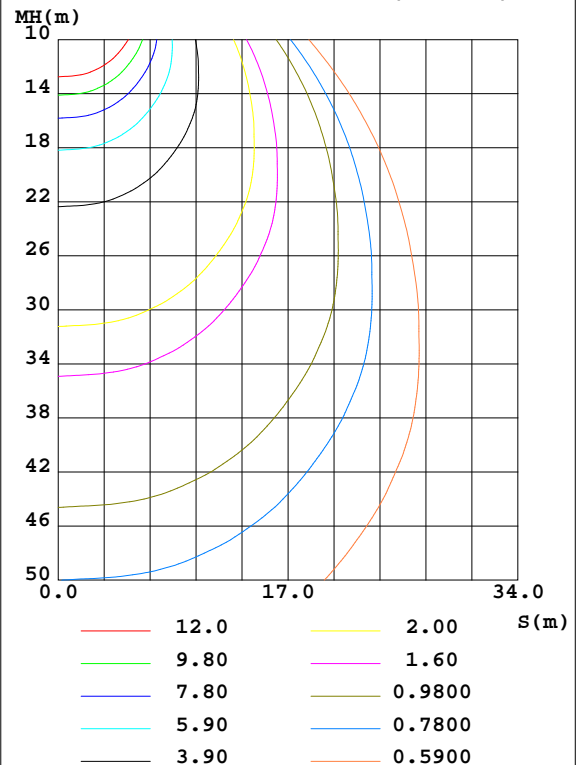
Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm		
NAME: LED RECTANGULAR SMD 60W	TYPE:	WEIGHT:
SPEC.:05000724	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 79.95 lm/W			
MODEL	2835 182 3000K	I _{max} (cd)	1967	S/MH(C0/180)	1.27
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	100-240	TOTAL FLUX(lm)	4781.4	η UP,DN(C0-180)	0.0,49.7
NOMINAL FLUX(lm)	4781.42	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-14

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [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
5	1953	1950	1952	1957	1962	1959	1953	1952	0- 5	46.67	46.67	0.98,0.98
10	1953	1953	1954	1964	1961	1966	1955	1955	5- 10	140.0	186.7	3.9,3.9
15	1920	1940	1913	1947	1938	1954	1919	1940	10- 15	230.9	417.6	8.73,8.73
20	1858	1886	1871	1902	1879	1913	1883	1894	15- 20	314.9	732.5	15.3,15.3
25	1763	1819	1747	1836	1794	1851	1773	1828	20- 25	387.2	1120	23.4,23.4
30	1655	1694	1624	1715	1683	1736	1662	1717	25- 30	441.3	1561	32.6,32.6
35	1517	1528	1443	1551	1541	1571	1476	1552	30- 35	473.3	2034	42.5,42.5
40	1327	1354	1261	1377	1356	1389	1290	1379	35- 40	478.6	2513	52.6,52.6
45	1143	1164	1073	1185	1176	1194	1094	1182	40- 45	462.2	2975	62.2,62.2
50	965.3	980.5	885.5	997.6	998.1	1010	897.6	995.2	45- 50	428.5	3404	71.2,71.2
55	783.0	791.7	705.5	801.3	814.8	815.5	716.0	801.3	50- 55	379.7	3783	79.1,79.1
60	605.5	613.0	525.4	614.1	635.4	633.9	534.5	618.6	55- 60	319.3	4102	85.8,85.8
65	446.0	447.2	385.6	447.5	469.1	467.2	396.7	452.9	60- 65	252.7	4355	91.1,91.1
70	307.4	305.7	245.7	304.2	322.5	322.6	258.9	310.8	65- 70	187.3	4543	95,95
75	193.2	187.5	161.1	185.3	202.0	201.4	175.3	193.2	70- 75	127.1	4670	97.7,97.7
80	99.58	102.9	76.52	96.48	103.7	115.0	91.69	110.4	75- 80	77.19	4747	99.3,99.3
85	23.10	23.32	0	19.70	23.22	27.93	0	26.77	80- 85	32.31	4779	100,100
90	1.449	0	0	0	1.536	0	0	0	85- 90	2.324	4781	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

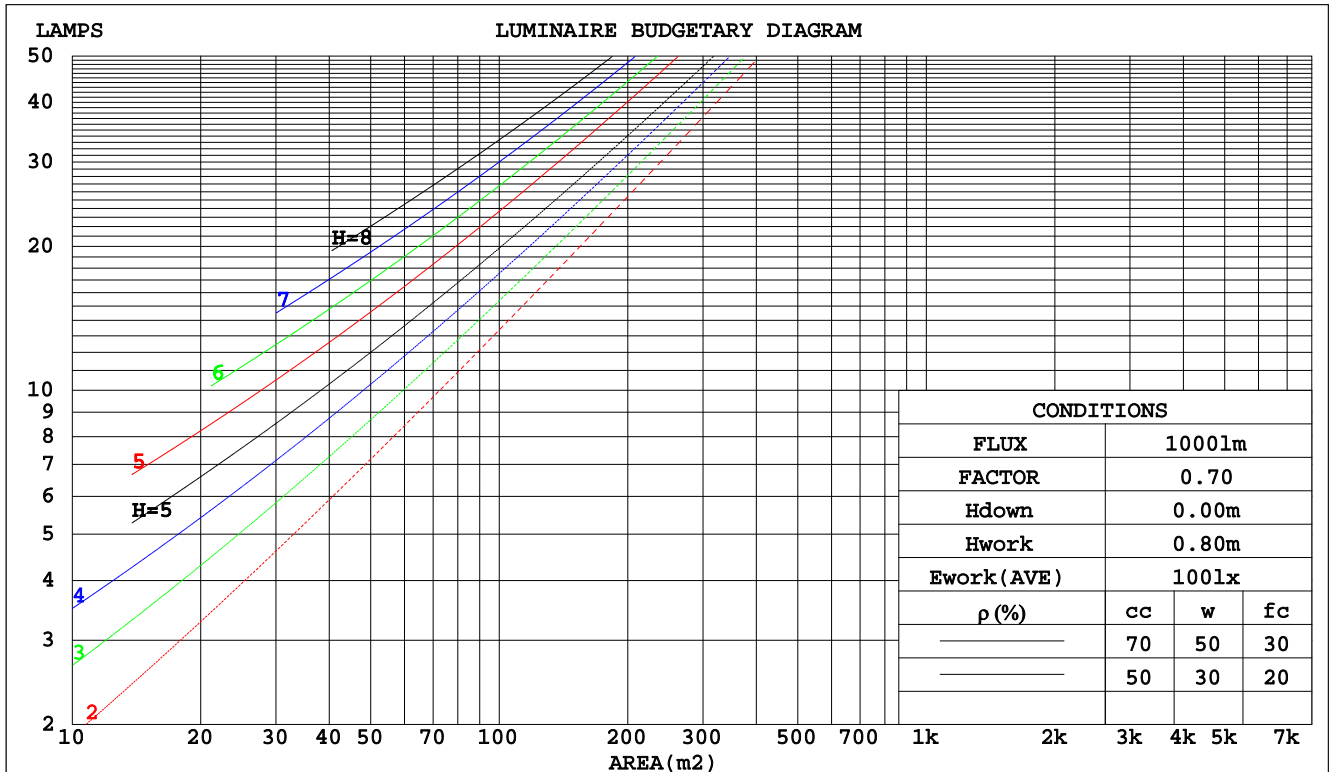
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-05-14

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:7.310m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm		
NAME: LED RECTANGULAR SMD 60W	TYPE:	WEIGHT:
SPEC.:05000724	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION 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	1.06	1.02	.99	1.04	1.00	.97	.99	.97	.94	.96	.93	.91	.92	.90	.88	.86
2.0	.94	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.78	.82	.79	.76	.74
3.0	.83	.76	.70	.81	.75	.69	.79	.73	.68	.76	.71	.67	.73	.69	.65	.63
4.0	.74	.66	.60	.73	.65	.59	.70	.64	.59	.68	.62	.58	.66	.61	.57	.55
5.0	.67	.58	.52	.66	.58	.52	.64	.57	.51	.62	.56	.51	.60	.54	.50	.48
6.0	.60	.52	.46	.59	.51	.46	.58	.51	.45	.56	.50	.45	.55	.49	.45	.43
7.0	.55	.47	.41	.54	.46	.41	.53	.46	.40	.51	.45	.40	.50	.44	.40	.38
8.0	.50	.42	.37	.50	.42	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.34
9.0	.46	.38	.33	.46	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.31
10.0	.43	.35	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.40	.34	.30	.28



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-05-14

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:7.310m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm					
NAME: LED RECTANGULAR SMD 60W			TYPE:		WEIGHT:
SPEC.:05000724			DIM.:		SERIAL No.:
MFR.: Mobilux GmbH			SUR.:72		PROTECTION 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	.272	.155	.049	.265	.151	.048	.252	.145	.046	.240	.138	.044	.229	.133	.043		
2.0	.262	.144	.044	.256	.141	.043	.245	.136	.042	.234	.131	.041	.224	.127	.040		
3.0	.246	.131	.039	.241	.129	.039	.231	.125	.038	.222	.121	.037	.213	.118	.037		
4.0	.230	.120	.035	.226	.118	.035	.217	.115	.034	.208	.112	.034	.201	.109	.033		
5.0	.215	.110	.032	.211	.108	.032	.203	.106	.031	.196	.103	.031	.189	.101	.030		
6.0	.201	.101	.029	.197	.100	.029	.190	.097	.028	.184	.095	.028	.178	.093	.028		
7.0	.188	.093	.026	.185	.092	.026	.179	.090	.026	.173	.089	.026	.167	.087	.026		
8.0	.177	.086	.024	.174	.086	.024	.168	.084	.024	.163	.083	.024	.158	.081	.024		
9.0	.167	.081	.022	.164	.080	.022	.159	.079	.022	.154	.077	.022	.150	.076	.022		
10.0	.157	.075	.021	.155	.075	.021	.150	.074	.021	.146	.072	.021	.142	.071	.020		

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	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.078	.137	.098	.067	.094	.068	.047	.054	.040	.028	.017	.013	.009	
4.0	.152	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007	
5.0	.145	.090	.049	.124	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.138	.081	.041	.119	.071	.036	.082	.049	.025	.047	.029	.015	.015	.009	.005	
7.0	.131	.075	.035	.113	.065	.030	.078	.045	.021	.045	.027	.013	.015	.009	.004	
8.0	.125	.069	.030	.108	.060	.026	.075	.042	.018	.043	.025	.011	.014	.008	.004	
9.0	.120	.064	.026	.103	.055	.023	.071	.039	.016	.042	.023	.010	.013	.008	.003	
10.0	.114	.059	.023	.098	.052	.020	.068	.036	.014	.040	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-14

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm										
NAME: LED RECTANGULAR SMD 60W					TYPE:			WEIGHT:		
SPEC.:05000724					DIM.:			SERIAL No.:		
MFR.: Mobilux GmbH					SUR.:72			PROTECTION 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	32.9	34.4	33.2	34.6	34.8	32.4	33.8	32.7	34.0	34.2
3H	33.9	35.2	34.2	35.4	35.7	33.2	34.5	33.4	34.7	34.9
4H	34.2	35.4	34.5	35.7	35.9	33.4	34.6	33.7	34.9	35.1
6H	34.4	35.5	34.7	35.8	36.1	33.5	34.7	33.8	34.9	35.2
8H	34.4	35.5	34.7	35.8	36.1	33.5	34.6	33.8	34.9	35.2
12H	34.4	35.4	34.7	35.7	36.0	33.5	34.5	33.8	34.8	35.1
4H 2H	33.3	34.6	33.6	34.8	35.1	32.9	34.1	33.2	34.4	34.6
3H	34.5	35.5	34.8	35.8	36.1	33.8	34.9	34.1	35.2	35.5
4H	34.9	35.9	35.3	36.2	36.5	34.1	35.1	34.5	35.4	35.8
6H	35.1	36.0	35.5	36.4	36.7	34.3	35.2	34.7	35.5	35.9
8H	35.2	36.0	35.6	36.4	36.7	34.4	35.2	34.8	35.5	35.9
12H	35.2	35.9	35.6	36.3	36.7	34.3	35.1	34.7	35.4	35.8
8H 4H	35.0	35.8	35.4	36.1	36.5	34.3	35.1	34.7	35.5	35.8
6H	35.3	36.0	35.8	36.4	36.8	34.6	35.3	35.0	35.7	36.1
8H	35.5	36.0	35.9	36.5	36.9	34.6	35.2	35.1	35.6	36.1
12H	35.5	36.0	36.0	36.4	36.9	34.6	35.1	35.1	35.6	36.0
12H 4H	35.0	35.7	35.4	36.1	36.5	34.3	35.0	34.7	35.4	35.8
6H	35.4	35.9	35.8	36.4	36.8	34.6	35.2	35.1	35.6	36.1
8H	35.5	36.0	36.0	36.4	36.9	34.7	35.2	35.1	35.6	36.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.5 / - 0.6					+ 0.5 / - 0.8				

CIE Pub.117 Corrected 4781 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.4)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-14

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm		
NAME: LED RECTANGULAR SMD 60W	TYPE:	WEIGHT:
SPEC.:05000724	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:

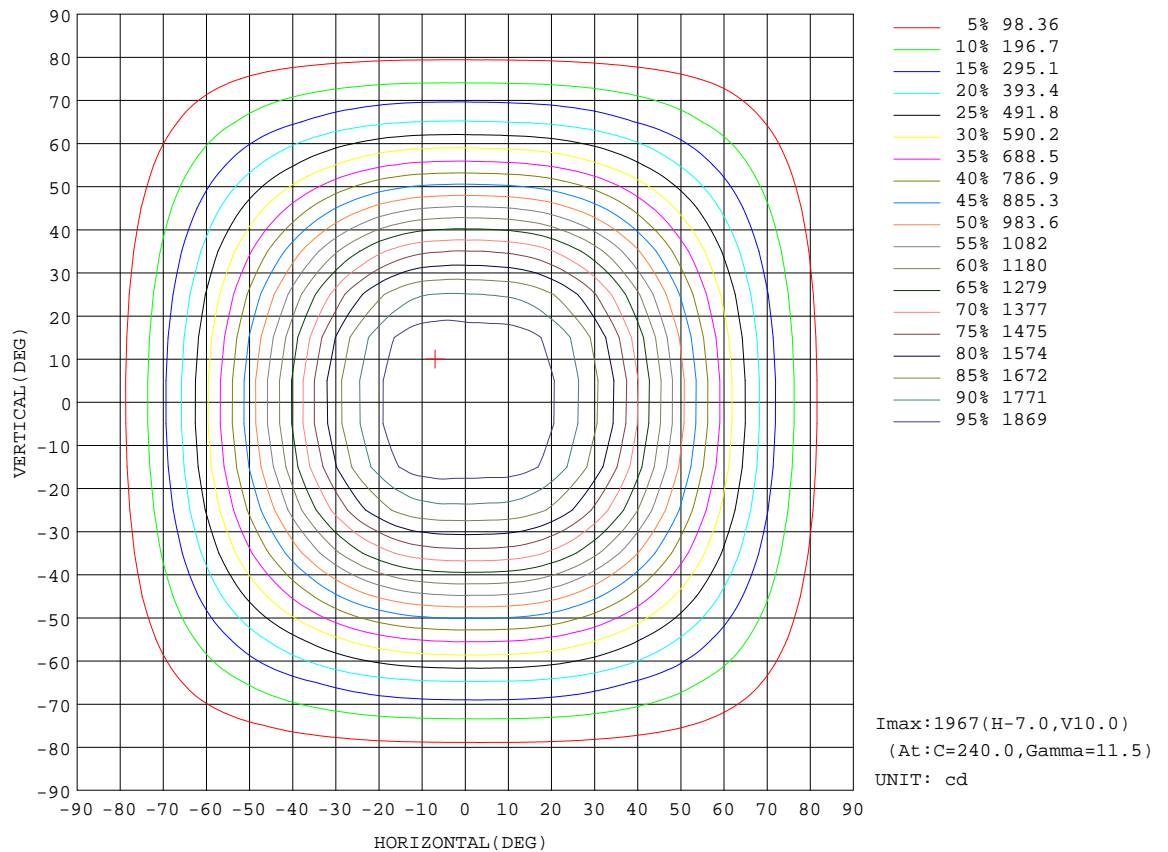
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	62	51	45	61	51	44	60	50	44	38
0.80	72	61	55	71	61	54	69	60	54	48
1.00	80	70	64	79	70	63	77	71	63	56
1.25	87	78	71	86	77	71	83	76	70	64
1.50	92	83	77	90	82	76	87	81	75	68
2.00	98	91	85	96	89	84	93	87	83	75
2.50	102	95	89	100	93	89	96	91	87	79
3.00	105	99	94	103	97	93	99	94	90	83
4.00	108	103	99	106	101	98	102	98	95	87
5.00	110	106	102	108	104	101	103	100	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-14

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm		
NAME: LED RECTANGULAR SMD 60W	TYPE:	WEIGHT:
SPEC.:05000724	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:

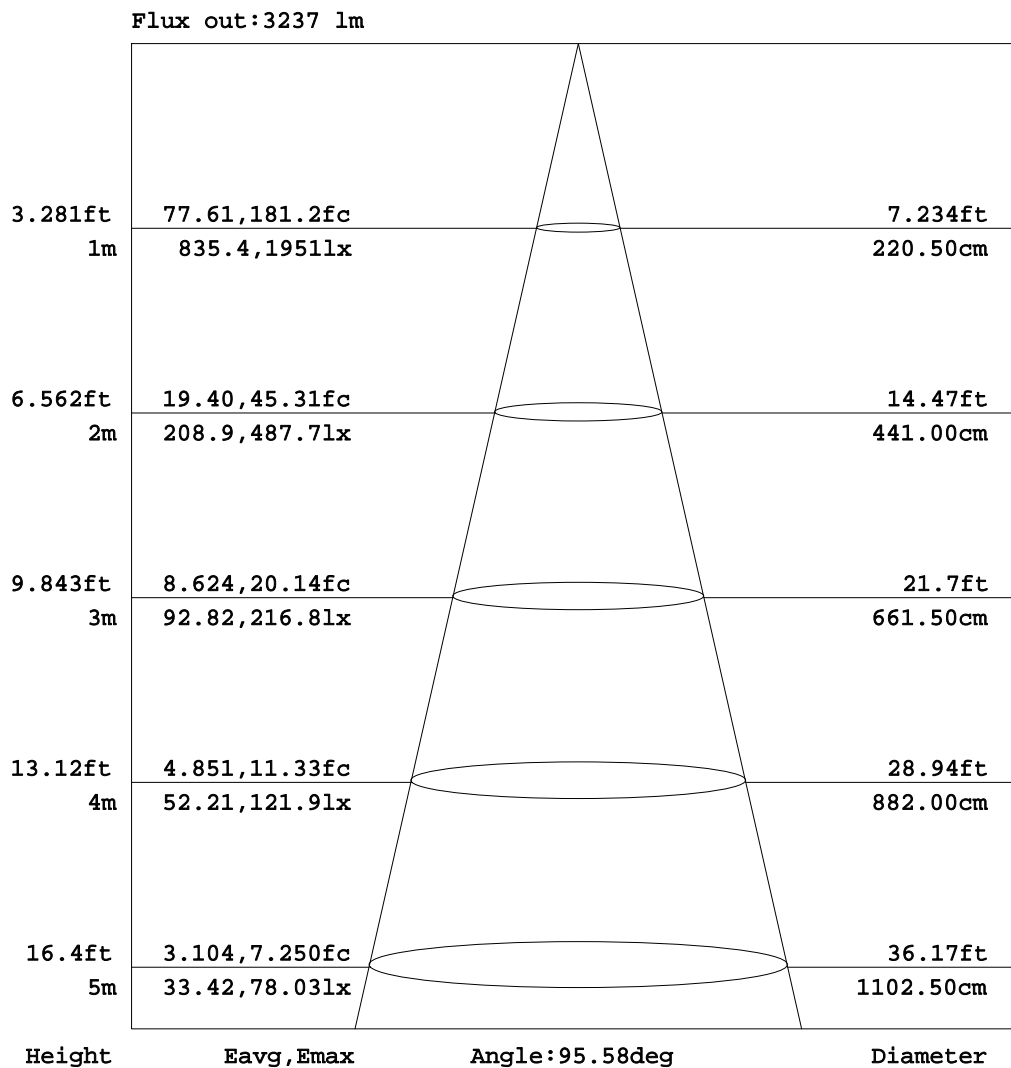


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-14

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm		
NAME: LED RECTANGULAR SMD 60W	TYPE:	WEIGHT:
SPEC.:05000724	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:



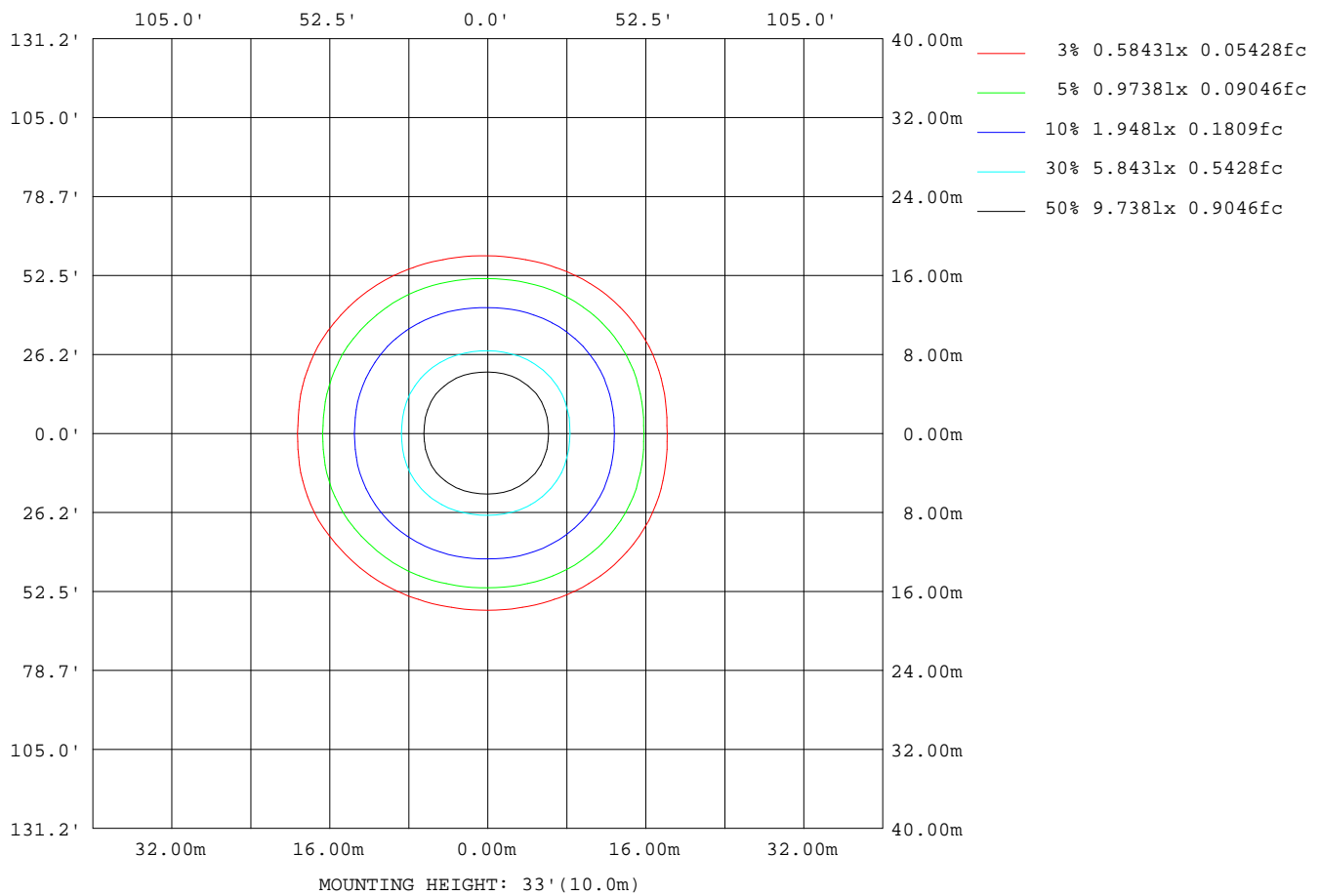
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-14

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

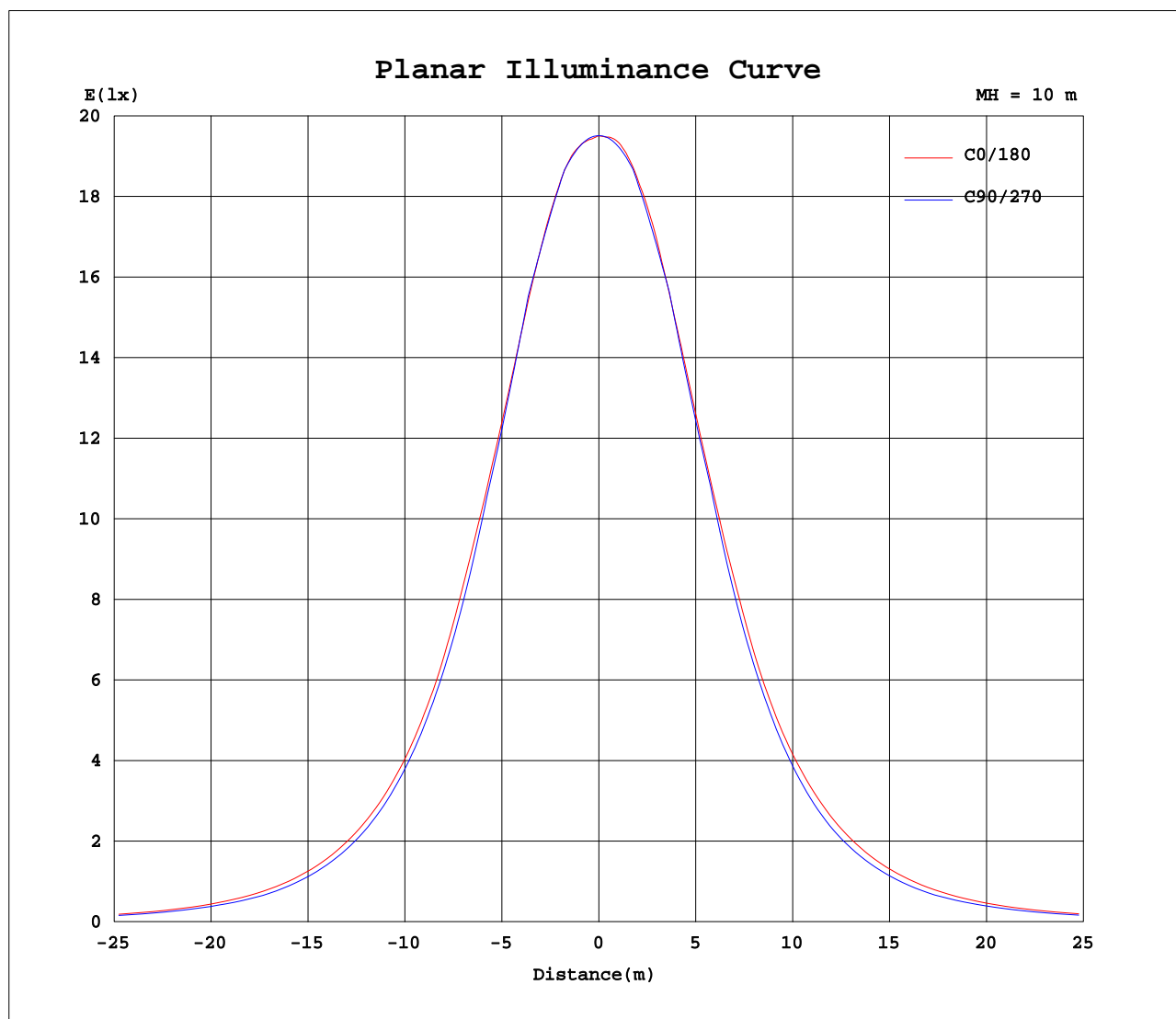
Test:U:220.1V I:0.2785A P:59.81W PF:0.9754 Lamp Flux:4781.42x1 lm		
NAME: LED RECTANGULAR SMD 60W	TYPE:	WEIGHT:
SPEC.:05000724	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-05-14

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:7.310m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2016-05-14

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 7.310m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
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Remarks:

```

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γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:7.310m [K=1.0000]
Remarks:

```