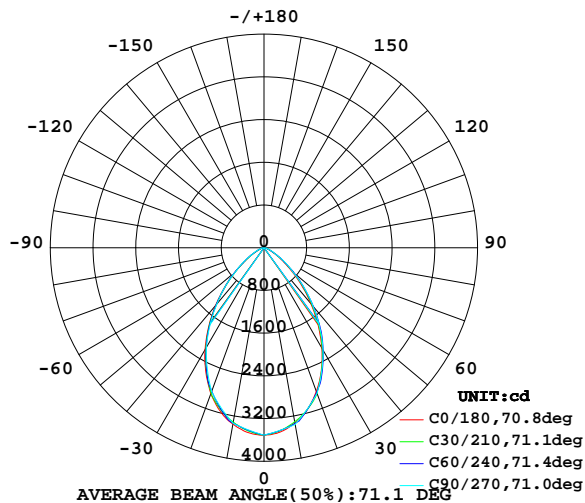


LUMINAIRE PHOTOMETRIC TEST REPORT

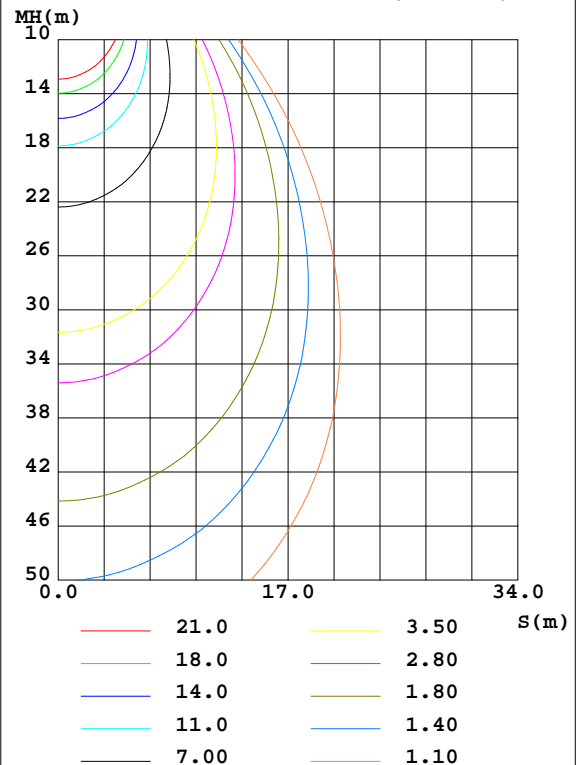
Test:U:220.1V I:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 81.95 lm/W			
MODEL	2835 182 3000K	I _{max} (cd)	3509	S/MH(C0/180)	1.01
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	0.98
RATED VOLTAGE(V)	100-240	TOTAL FLUX(lm)	4918.8	η UP,DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	4918.79	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	1.05

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:2016-05-12

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	$\%lum, lamp$
5	3465	3437	3434	3435	3473	3433	3424	3425	0- 5	82.85	82.85	1.68,1.68
10	3336	3322	3359	3319	3354	3323	3339	3301	5- 10	241.8	324.6	6.6,6.6
15	3137	3160	3130	3150	3170	3155	3103	3113	10- 15	383.0	707.6	14.4,14.4
20	2864	2877	2902	2862	2911	2863	2867	2815	15- 20	493.5	1201	24.4,24.4
25	2540	2572	2558	2553	2579	2555	2511	2495	20- 25	566.7	1768	35.9,35.9
30	2166	2213	2215	2192	2212	2185	2156	2130	25- 30	596.2	2364	48.1,48.1
35	1766	1821	1822	1791	1810	1778	1764	1739	30- 35	582.4	2946	59.9,59.9
40	1367	1442	1430	1401	1410	1386	1372	1359	35- 40	528.6	3475	70.6,70.6
45	999.7	1064	1069	1036	1041	1023	1030	998.9	40- 45	446.8	3922	79.7,79.7
50	671.4	723.9	707.9	711.2	706.0	695.9	687.5	677.2	45- 50	348.3	4270	86.8,86.8
55	421.5	473.8	487.8	467.6	445.3	455.0	478.1	449.7	50- 55	248.2	4518	91.9,91.9
60	249.2	275.8	267.7	272.0	265.1	264.0	268.8	267.9	55- 60	165.6	4684	95.2,95.2
65	141.2	163.4	177.9	163.3	148.4	160.9	180.8	162.8	60- 65	102.0	4786	97.3,97.3
70	80.81	90.34	88.06	92.00	83.92	92.74	92.87	94.54	65- 70	62.25	4848	98.6,98.6
75	47.05	51.42	59.09	52.29	48.06	54.17	64.44	56.63	70- 75	36.73	4885	99.3,99.3
80	27.24	28.80	30.13	29.28	27.91	33.00	36.00	34.54	75- 80	22.72	4908	99.8,99.8
85	7.711	6.943	0	7.006	8.929	9.068	0	9.347	80- 85	10.36	4918	100,100
90	0.6028	0	0	0	0.9139	0	0	0	85- 90	0.7744	4919	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		

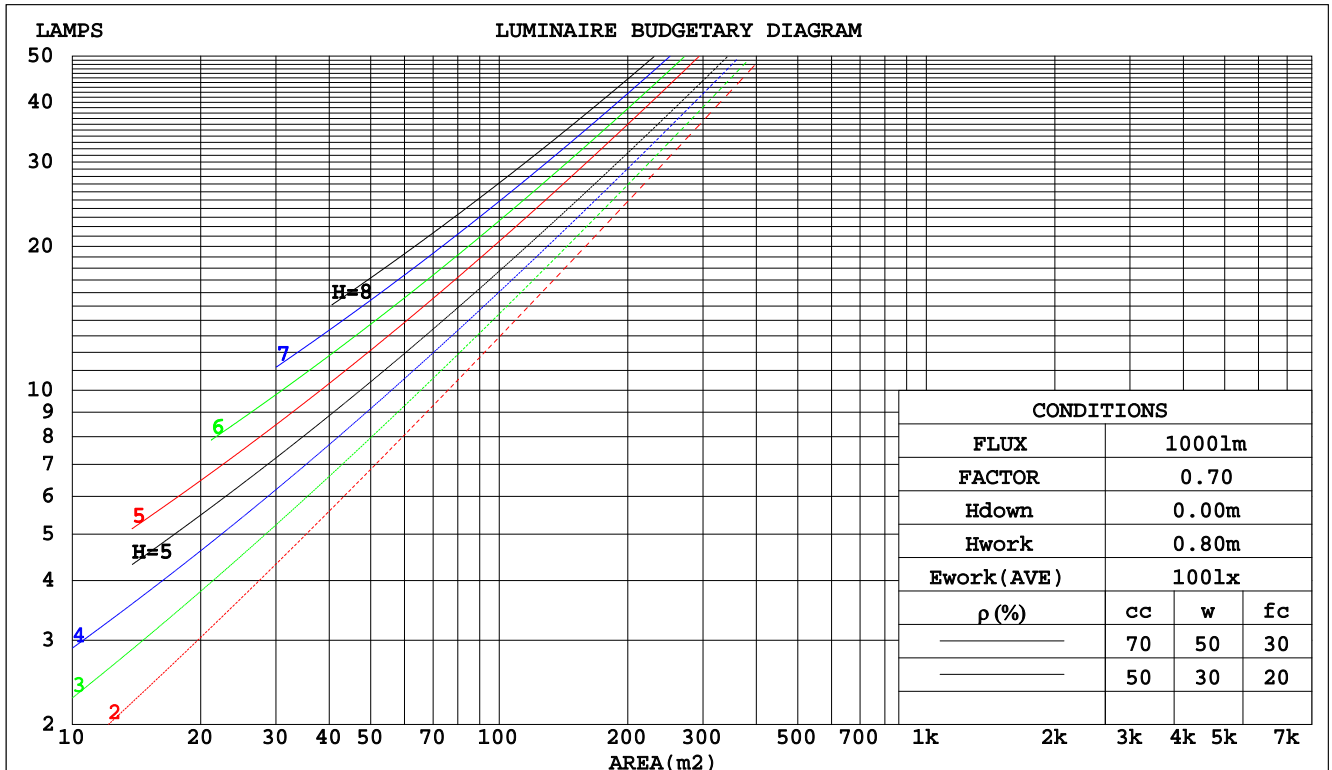
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-12

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:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	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	1.00
1.0	1.09	1.05	1.03	1.06	1.04	1.01	1.02	1.00	.98	.98	.97	.95	.95	.94	.92	.90
2.0	.99	.94	.89	.97	.92	.88	.93	.90	.86	.90	.87	.84	.88	.85	.83	.81
3.0	.90	.84	.79	.88	.83	.78	.85	.81	.77	.83	.79	.75	.81	.77	.74	.72
4.0	.82	.75	.70	.81	.74	.69	.78	.73	.69	.76	.72	.68	.74	.70	.67	.65
5.0	.75	.68	.63	.74	.67	.62	.72	.66	.62	.70	.65	.61	.69	.64	.61	.59
6.0	.69	.62	.57	.68	.61	.56	.67	.60	.56	.65	.60	.55	.64	.59	.55	.53
7.0	.64	.57	.51	.63	.56	.51	.62	.55	.51	.60	.55	.51	.59	.54	.50	.49
8.0	.59	.52	.47	.59	.52	.47	.57	.51	.47	.56	.51	.46	.55	.50	.46	.45
9.0	.55	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.52	.46	.43	.41
10.0	.51	.45	.40	.51	.44	.40	.50	.44	.40	.49	.44	.40	.48	.43	.40	.38



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2016-05-12

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:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	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	.220	.125	.040	.213	.122	.039	.200	.115	.037	.189	.109	.035	.178	.103	.033	
2.0	.214	.117	.036	.208	.114	.035	.197	.109	.034	.187	.105	.033	.177	.100	.032	
3.0	.204	.108	.032	.199	.106	.032	.189	.102	.031	.180	.099	.030	.172	.095	.029	
4.0	.193	.100	.029	.189	.099	.029	.180	.096	.029	.173	.093	.028	.165	.090	.027	
5.0	.183	.093	.027	.179	.092	.027	.171	.089	.026	.165	.087	.026	.158	.085	.025	
6.0	.173	.087	.025	.170	.086	.025	.163	.084	.024	.157	.082	.024	.151	.080	.024	
7.0	.164	.081	.023	.161	.080	.023	.155	.078	.023	.150	.077	.022	.144	.075	.022	
8.0	.155	.076	.021	.153	.075	.021	.148	.074	.021	.143	.072	.021	.138	.071	.021	
9.0	.148	.071	.020	.145	.071	.020	.141	.069	.020	.136	.068	.020	.132	.067	.019	
10.0	.141	.067	.019	.138	.067	.019	.134	.066	.018	.130	.065	.018	.126	.064	.018	

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	.174	.157	.141	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.162	.132	.107	.139	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.152	.114	.084	.130	.098	.073	.089	.068	.051	.052	.040	.030	.017	.013	.010	
4.0	.143	.100	.067	.123	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.054	.116	.077	.047	.080	.054	.033	.046	.031	.020	.015	.010	.007	
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.016	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.117	.067	.033	.100	.058	.028	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.111	.062	.028	.096	.054	.025	.066	.038	.018	.039	.022	.010	.013	.007	.003	
10.0	.106	.057	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-12

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:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm										
NAME: LED Rohrstrahler 3000K 60W					TYPE:			WEIGHT:		
SPEC.:05000725					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	30.1	31.3	30.3	31.5	31.6	30.4	31.6	30.7	31.8	32.0
3H	30.1	31.2	30.4	31.4	31.7	30.5	31.6	30.8	31.9	32.1
4H	30.1	31.1	30.4	31.4	31.6	30.5	31.6	30.8	31.8	32.1
6H	30.1	31.0	30.4	31.3	31.6	30.5	31.5	30.8	31.7	32.0
8H	30.0	31.0	30.4	31.2	31.5	30.5	31.4	30.8	31.7	32.0
12H	30.0	30.9	30.3	31.2	31.5	30.4	31.3	30.8	31.6	31.9
4H 2H	30.1	31.1	30.4	31.4	31.6	30.4	31.5	30.7	31.7	31.9
3H	30.2	31.1	30.5	31.4	31.7	30.6	31.5	30.9	31.8	32.1
4H	30.2	31.0	30.6	31.3	31.7	30.6	31.4	31.0	31.8	32.1
6H	30.2	30.9	30.6	31.3	31.6	30.7	31.4	31.0	31.7	32.1
8H	30.2	30.9	30.6	31.2	31.6	30.6	31.3	31.0	31.6	32.0
12H	30.2	30.8	30.6	31.2	31.6	30.6	31.2	31.0	31.6	32.0
8H 4H	30.2	30.8	30.6	31.2	31.6	30.6	31.2	31.0	31.6	32.0
6H	30.2	30.7	30.6	31.1	31.6	30.6	31.2	31.0	31.6	32.0
8H	30.2	30.7	30.7	31.1	31.5	30.6	31.1	31.1	31.5	31.9
12H	30.2	30.6	30.7	31.0	31.5	30.6	31.0	31.0	31.4	31.9
12H 4H	30.1	30.7	30.5	31.1	31.5	30.5	31.1	30.9	31.5	31.9
6H	30.2	30.6	30.6	31.1	31.5	30.6	31.1	31.0	31.5	31.9
8H	30.2	30.6	30.7	31.0	31.5	30.6	31.0	31.1	31.4	31.9
Variations with the observer position at spacings:										
S = 1.0H	+ 1.3 / - 2.1					+ 1.1 / - 1.7				
1.5H	+ 1.1 / - 1.2					+ 1.1 / - 1.4				
2.0H	+ 2.7 / - 2.8					+ 2.7 / - 3.2				

CIE Pub.117 Corrected 4919 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.5)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-12

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:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:

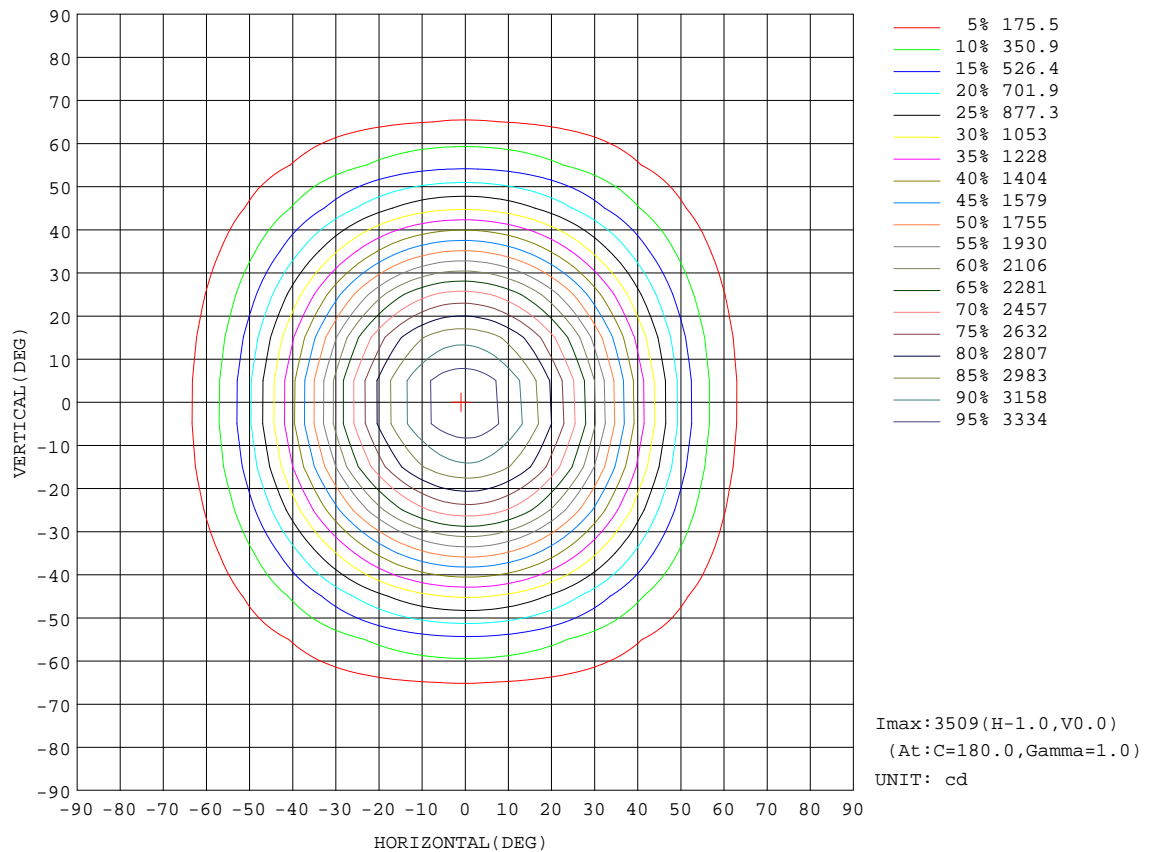
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	73	64	59	72	64	58	71	63	58	53
0.80	82	74	68	81	73	68	80	73	68	63
1.00	89	81	76	88	81	76	87	81	75	70
1.25	95	88	83	94	87	82	92	86	82	76
1.50	99	92	87	98	91	87	95	90	86	80
2.00	104	98	94	102	97	93	99	95	91	85
2.50	106	101	97	104	100	96	101	97	94	87
3.00	108	104	100	106	102	99	103	99	97	90
4.00	111	107	104	109	105	103	105	102	100	92
5.00	113	109	107	110	107	105	106	104	102	94
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-12

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:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:

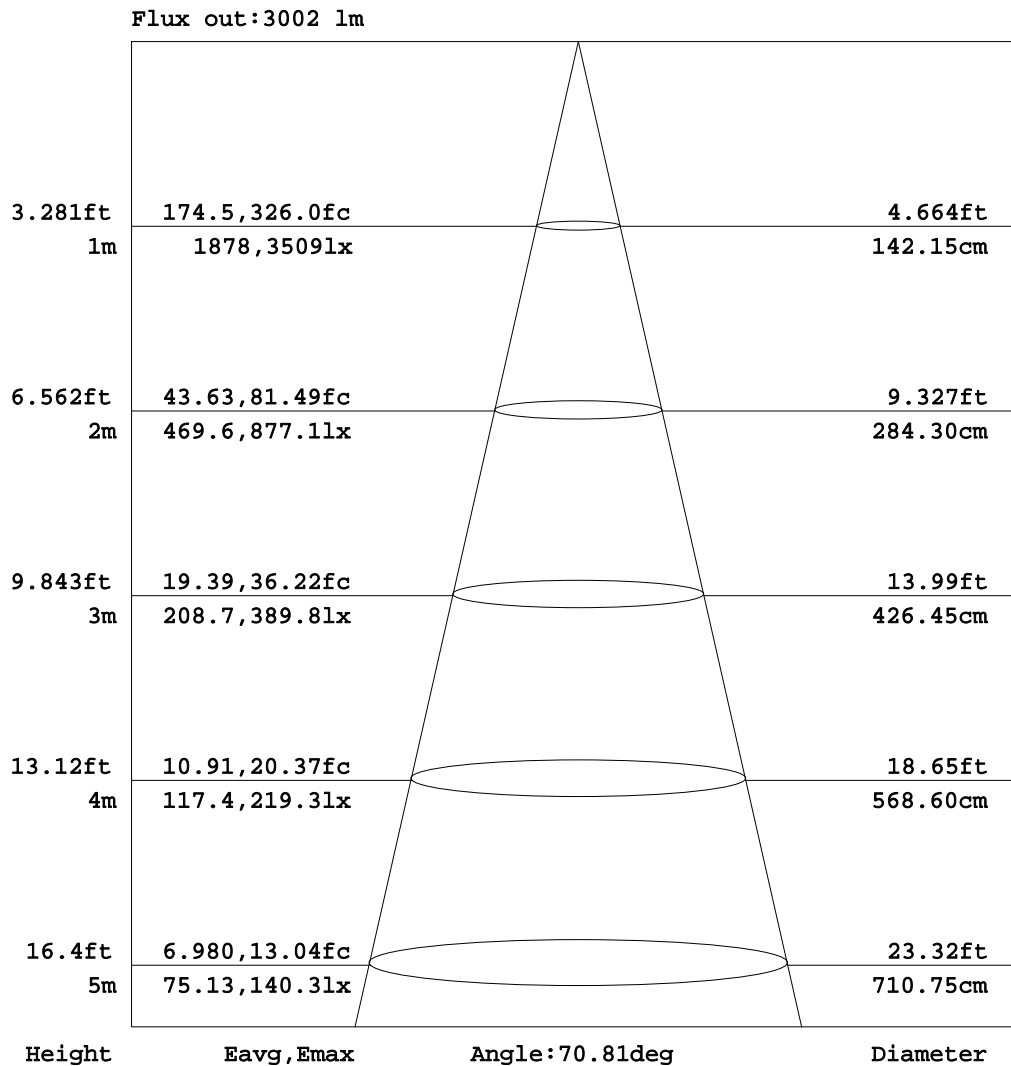


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2016-05-12

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:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:



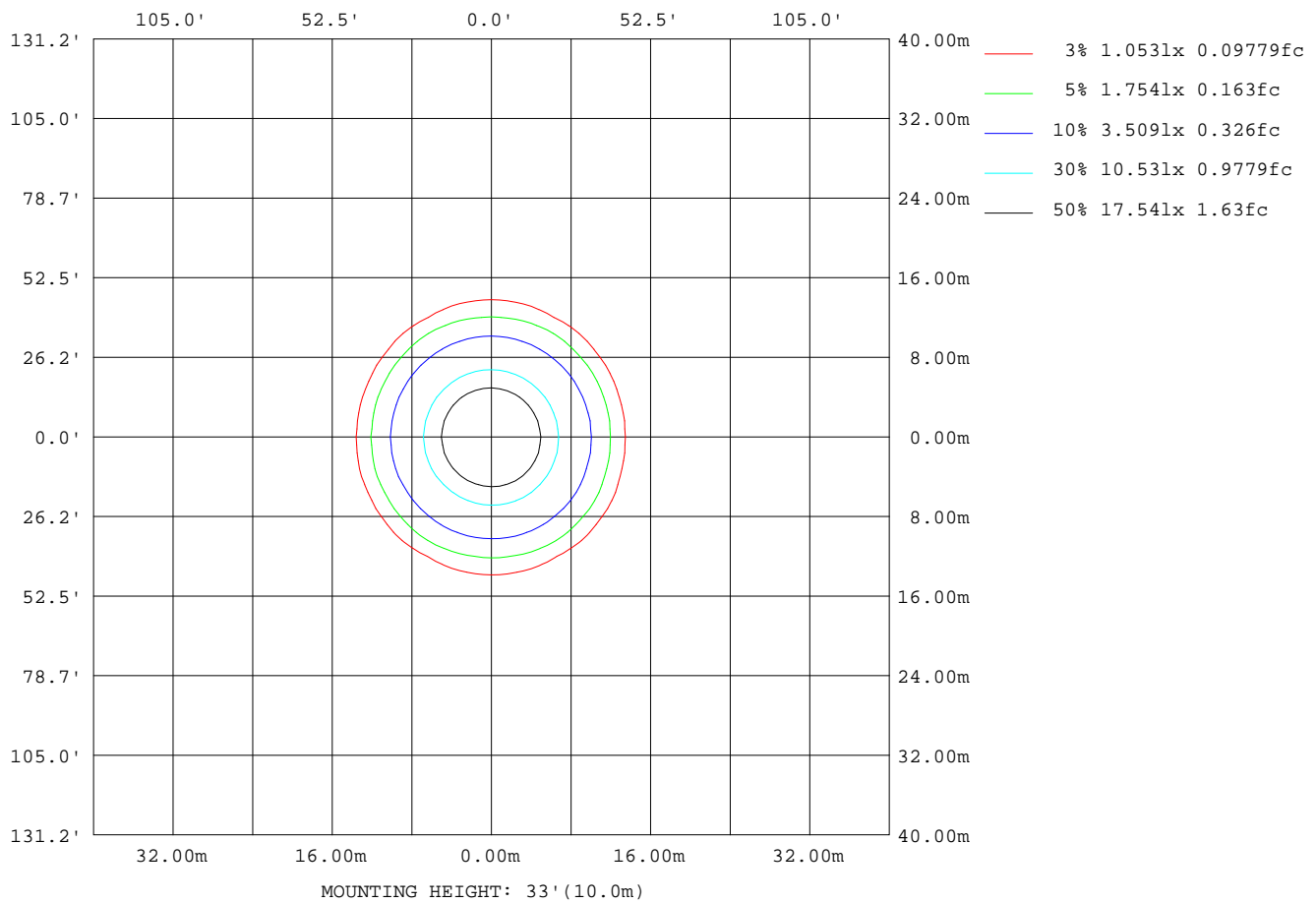
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-12

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

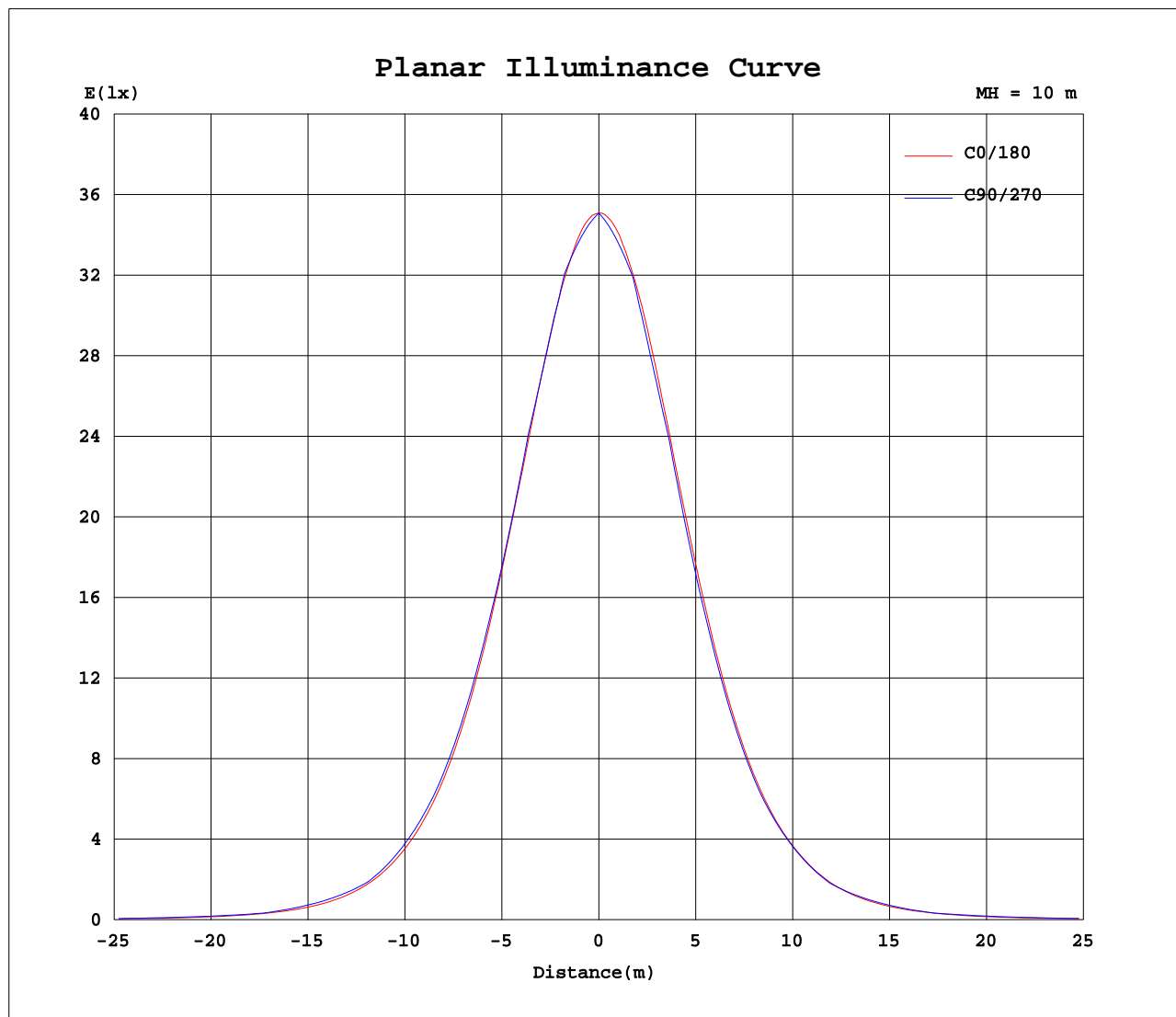
Test:U:220.1V I:0.2799A P:60.02W PF:0.9744 Lamp Flux:4918.79x1 lm		
NAME: LED Rohrstrahler 3000K 60W	TYPE:	WEIGHT:
SPEC.:05000725	DIM.:	SERIAL No.:
MFR.: Mobilux GmbH	SUR.:72	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-05-12

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: 2016-05-12

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
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:

```