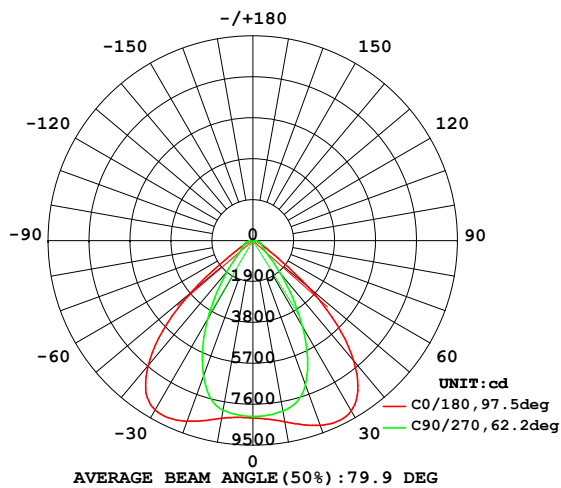


LUMINAIRE PHOTOMETRIC TEST REPORT

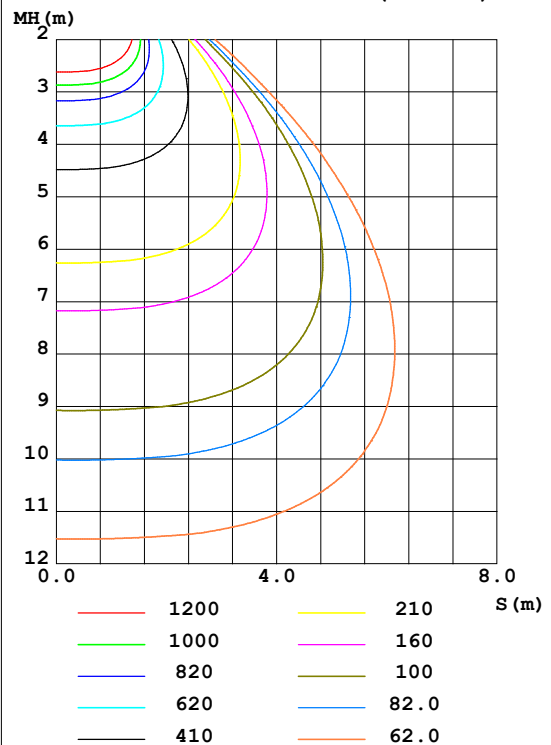
Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm		
NAME: BT-LON-150W	TYPE: LENS	WEIGHT: 3.8kg
SPEC.: 5000K R80 60LEDs 60X100D	DIM.: D260*H184mm	SERIAL No.:
MFR.: EVERFINE	SUR.: 163*163mm	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 99.00 lm/W
MODEL	SMD3535	I _{max} (cd)	9270	S/MH(C0/180)	1.42	
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.91	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	14725	η UP,DN(C0-180)	0.3,49.8	
NOMINAL FLUX(lm)	14724.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,49.7	
LAMPS INSIDE	1	η up(%)	0.5	CIBSE SHR NOM	1.00	
TEST VOLTAGE(V)	220	η down(%)	99.5	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-06-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity: 65.0%
 Test Distance: 9.256m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	8536	8031	8374	7992					0- 10	783.9	783.9	5.32, 5.32
20	9116	7137	8917	6703					10- 20	2313	3097	21, 21
30	9124	4616	9080	4202					20- 30	3426	6523	44.3, 44.3
40	7286	2028	7562	1866					30- 40	3599	10123	68.7, 68.7
50	3360	743.0	3756	745.7					40- 50	2627	12750	86.6, 86.6
60	720.2	512.7	705.4	522.5					50- 60	1036	13786	93.6, 93.6
70	324.4	381.8	324.7	397.2					60- 70	455.4	14241	96.7, 96.7
80	174.4	178.1	177.4	192.4					70- 80	286.8	14528	98.7, 98.7
90	48.81	45.56	61.92	51.98					80- 90	123.4	14652	99.5, 99.5
100	1.405	1.192	0.8497	0.8491					90-100	17.07	14669	99.6, 99.6
110	4.733	2.429	2.609	1.848					100-110	1.781	14670	99.6, 99.6
120	9.840	3.765	6.303	2.857					110-120	4.305	14675	99.7, 99.7
130	17.19	6.728	11.82	5.225					120-130	6.951	14682	99.7, 99.7
140	23.28	12.59	17.80	10.15					130-140	10.09	14692	99.8, 99.8
150	27.14	19.50	22.55	15.69					140-150	11.66	14703	99.9, 99.9
160	29.56	25.45	26.55	21.17					150-160	10.82	14714	99.9, 99.9
170	30.70	29.81	28.83	26.69					160-170	7.716	14722	100, 100
180	31.74	32.00	31.92	31.78					170-180	2.875	14725	100, 100
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 255.3 %									UNIT:lm		

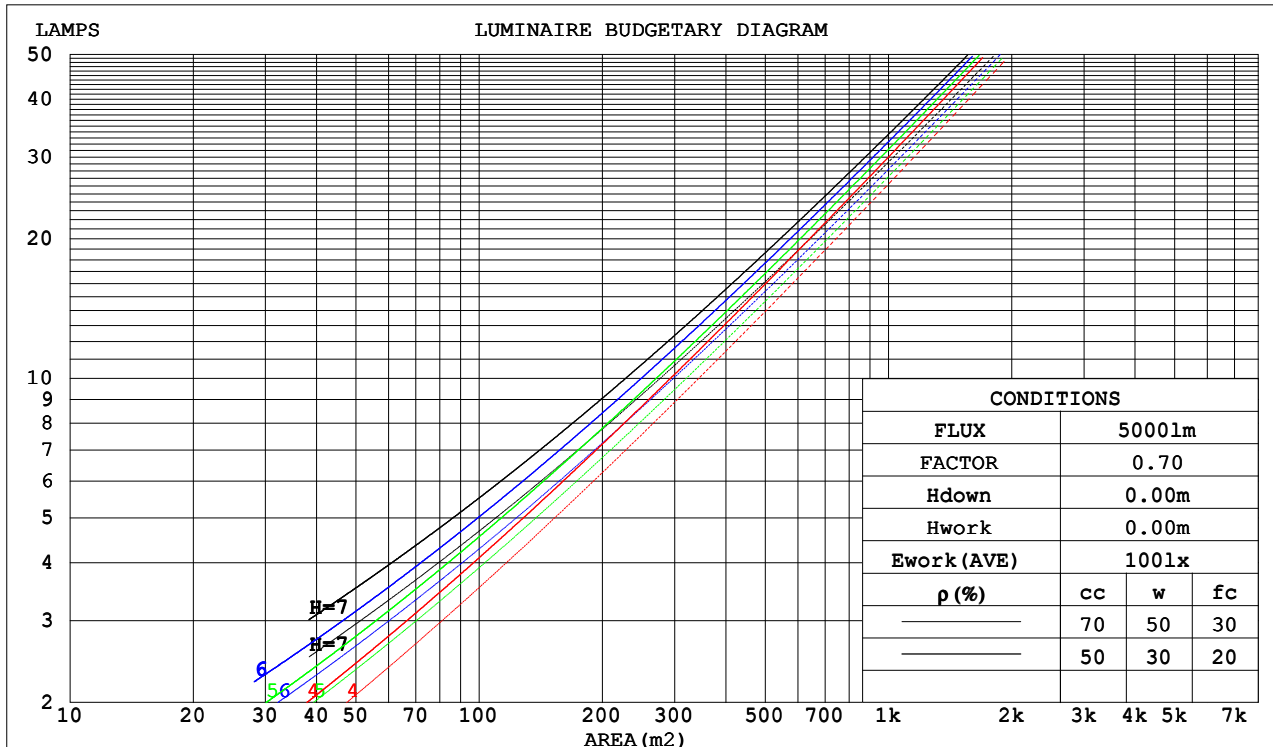
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-06-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity: 65.0%
 Test Distance: 9.256m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm		
NAME: BT-LON-150W	TYPE:LENS	WEIGHT:3.8kg
SPEC.:5000K R80 60LEDs 60X100D	DIM.: D260*H184mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	1.08	1.05	1.02	1.06	1.03	.00	1.01	.99	.97	.97	.96	.94	.94	.92	.91	.89
2.0	.98	.92	.88	.96	.91	.87	.92	.88	.85	.89	.86	.83	.86	.83	.81	.79
3.0	.89	.82	.77	.87	.81	.76	.84	.79	.75	.82	.77	.74	.79	.76	.72	.71
4.0	.81	.74	.68	.79	.73	.68	.77	.71	.67	.75	.70	.66	.73	.69	.65	.63
5.0	.74	.66	.61	.73	.66	.61	.71	.65	.60	.69	.63	.59	.67	.62	.59	.57
6.0	.68	.60	.55	.67	.60	.55	.65	.59	.54	.63	.58	.54	.62	.57	.53	.51
7.0	.62	.55	.50	.61	.54	.49	.60	.54	.49	.59	.53	.49	.57	.52	.48	.47
8.0	.57	.50	.45	.57	.50	.45	.56	.49	.45	.54	.49	.44	.53	.48	.44	.43
9.0	.53	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.41	.50	.44	.41	.39
10.0	.50	.43	.38	.49	.42	.38	.48	.42	.38	.47	.42	.38	.46	.41	.37	.36



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-06-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity: 65.0%
 Test Distance: 9.256m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm					
NAME: BT-LON-150W			TYPE:LENS		WEIGHT:3.8kg
SPEC.:5000K R80 60LEDs 60X100D			DIM.: D260*H184mm		SERIAL No.:
MFR.: EVERFINE			SUR.:163*163mm		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	.232	.132	.042	.225	.129	.041	.212	.122	.039	.200	.115	.037	.189	.110	.035		
2.0	.222	.122	.037	.216	.119	.037	.205	.114	.035	.194	.109	.034	.185	.104	.033		
3.0	.210	.112	.034	.205	.110	.033	.195	.106	.032	.186	.102	.031	.178	.098	.030		
4.0	.199	.103	.030	.194	.102	.030	.185	.098	.029	.177	.095	.029	.170	.092	.028		
5.0	.188	.096	.028	.184	.094	.027	.176	.092	.027	.169	.089	.026	.162	.087	.026		
6.0	.177	.089	.025	.174	.088	.025	.167	.086	.025	.161	.083	.025	.155	.081	.024		
7.0	.168	.083	.024	.165	.082	.023	.159	.080	.023	.153	.078	.023	.148	.077	.023		
8.0	.159	.078	.022	.156	.077	.022	.151	.075	.022	.146	.074	.021	.141	.072	.021		
9.0	.151	.073	.020	.149	.072	.020	.144	.071	.020	.139	.070	.020	.135	.068	.020		
10.0	.144	.069	.019	.142	.068	.019	.137	.067	.019	.133	.066	.019	.129	.065	.019		

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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.179	.161	.144	.153	.138	.124	.105	.095	.086	.060	.055	.050	.019	.018	.016	
2.0	.167	.136	.110	.143	.117	.095	.098	.081	.066	.056	.047	.039	.018	.015	.013	
3.0	.157	.118	.087	.134	.102	.075	.092	.071	.053	.053	.041	.031	.017	.013	.010	
4.0	.148	.104	.070	.127	.090	.061	.088	.062	.043	.051	.037	.025	.016	.012	.008	
5.0	.141	.093	.057	.121	.080	.050	.083	.056	.035	.048	.033	.021	.016	.011	.007	
6.0	.134	.084	.048	.115	.073	.042	.079	.051	.030	.046	.030	.018	.015	.010	.006	
7.0	.128	.077	.041	.110	.067	.036	.076	.047	.026	.044	.028	.015	.014	.009	.005	
8.0	.122	.071	.036	.105	.062	.031	.073	.043	.022	.042	.026	.013	.014	.008	.004	
9.0	.117	.066	.032	.101	.057	.028	.070	.040	.020	.041	.024	.012	.013	.008	.004	
10.0	.112	.062	.029	.096	.054	.025	.067	.038	.018	.039	.022	.011	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-06-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.256m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm										
NAME: BT-LON-150W					TYPE:LENS			WEIGHT:3.8kg		
SPEC.:5000K R80 60LEDs 60X100D					DIM.: D260*H184mm			SERIAL No.:		
MFR.: EVERFINE					SUR.:163*163mm			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	29.8	31.0	30.1	31.2	31.4	26.1	27.3	26.3	27.5	27.7
3H	29.8	30.9	30.1	31.2	31.4	26.6	27.7	26.9	27.9	28.2
4H	29.9	30.9	30.2	31.2	31.4	26.9	27.9	27.2	28.2	28.4
6H	29.9	30.9	30.2	31.2	31.4	27.1	28.1	27.5	28.4	28.7
8H	29.9	30.9	30.2	31.1	31.4	27.2	28.2	27.6	28.5	28.8
12H	29.9	30.8	30.3	31.1	31.4	27.4	28.3	27.8	28.6	28.9
4H 2H	29.6	30.7	29.9	30.9	31.2	26.2	27.2	26.5	27.5	27.7
3H	29.7	30.7	30.1	30.9	31.2	26.9	27.8	27.2	28.1	28.4
4H	29.9	30.7	30.2	31.0	31.3	27.3	28.2	27.7	28.5	28.8
6H	30.0	30.7	30.4	31.1	31.4	27.7	28.5	28.1	28.8	29.2
8H	30.1	30.7	30.5	31.1	31.5	27.9	28.6	28.3	28.9	29.3
12H	30.1	30.7	30.5	31.1	31.5	28.2	28.8	28.6	29.2	29.6
8H 4H	29.8	30.5	30.3	30.9	31.3	27.5	28.1	27.9	28.5	28.9
6H	30.1	30.6	30.5	31.0	31.5	28.0	28.5	28.4	29.0	29.4
8H	30.2	30.7	30.6	31.1	31.6	28.3	28.8	28.7	29.2	29.6
12H	30.3	30.7	30.8	31.2	31.7	28.7	29.1	29.2	29.6	30.0
12H 4H	29.8	30.4	30.2	30.8	31.2	27.4	28.1	27.9	28.5	28.9
6H	30.1	30.6	30.5	31.0	31.4	28.0	28.5	28.5	28.9	29.4
8H	30.2	30.6	30.7	31.1	31.6	28.4	28.8	28.8	29.2	29.7
Variations with the observer position at spacings:										
S = 1.0H	+ 1.8 / - 2.5					+ 1.3 / - 1.3				
1.5H	+ 2.1 / - 3.3					+ 1.3 / - 1.7				
2.0H	+ 4.9 / - 3.2					+ 1.6 / - 0.9				

CIE Pub.117 Corrected 14725 lm Total Lamp Luminous Flux. (8log(F/F0) = 9.3)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-06-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.256m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm		
NAME: BT-LON-150W	TYPE:LENS	WEIGHT:3.8kg
SPEC.:5000K R80 60LEDs 60X100D	DIM.: D260*H184mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:

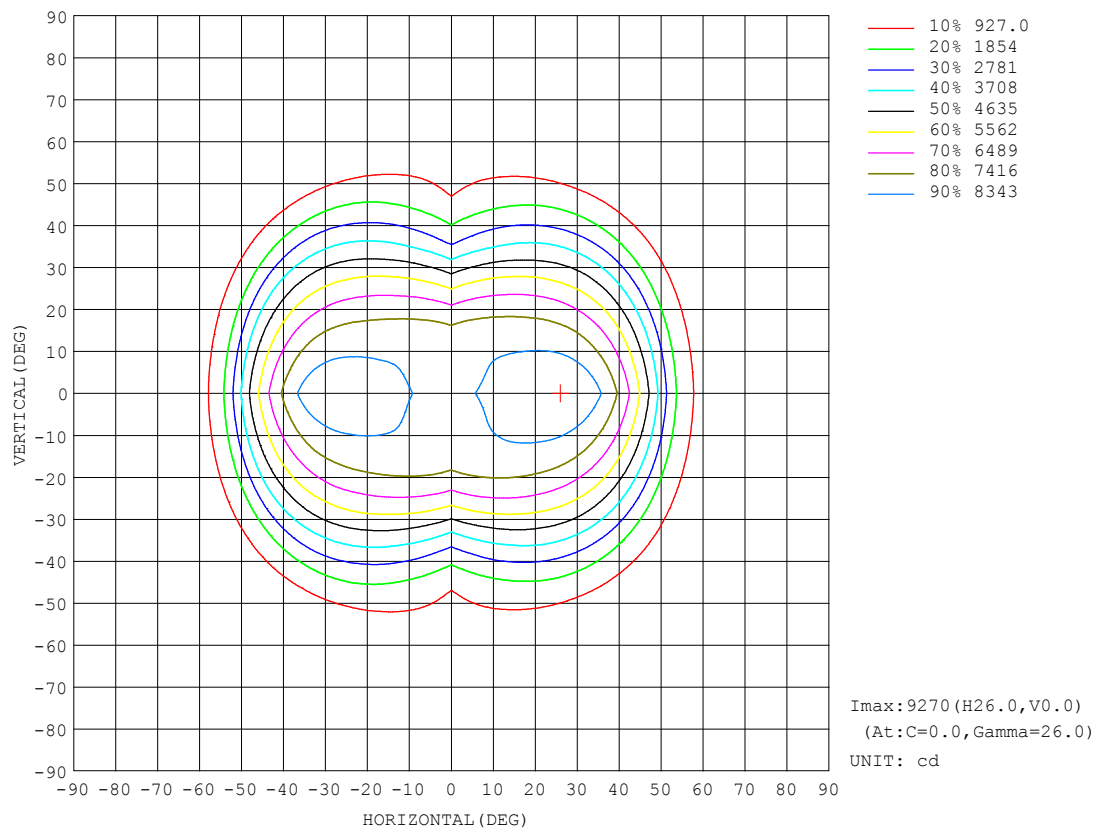
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	72	63	57	71	63	57	70	62	57	52
0.80	81	73	67	80	72	67	79	71	67	61
1.00	88	80	75	87	80	75	85	80	74	69
1.25	94	87	82	93	86	81	91	85	80	75
1.50	98	91	86	97	90	86	94	89	85	79
2.00	103	97	92	101	96	91	98	94	90	84
2.50	105	100	96	103	98	95	100	96	93	86
3.00	108	103	99	106	101	98	102	98	95	88
4.00	110	106	103	108	105	102	104	101	99	91
5.00	112	108	106	110	107	104	105	103	101	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-06-05

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:9.256m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm		
NAME: BT-LON-150W	TYPE:LENS	WEIGHT:3.8kg
SPEC.:5000K R80 60LEDs 60X100D	DIM.: D260*H184mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:

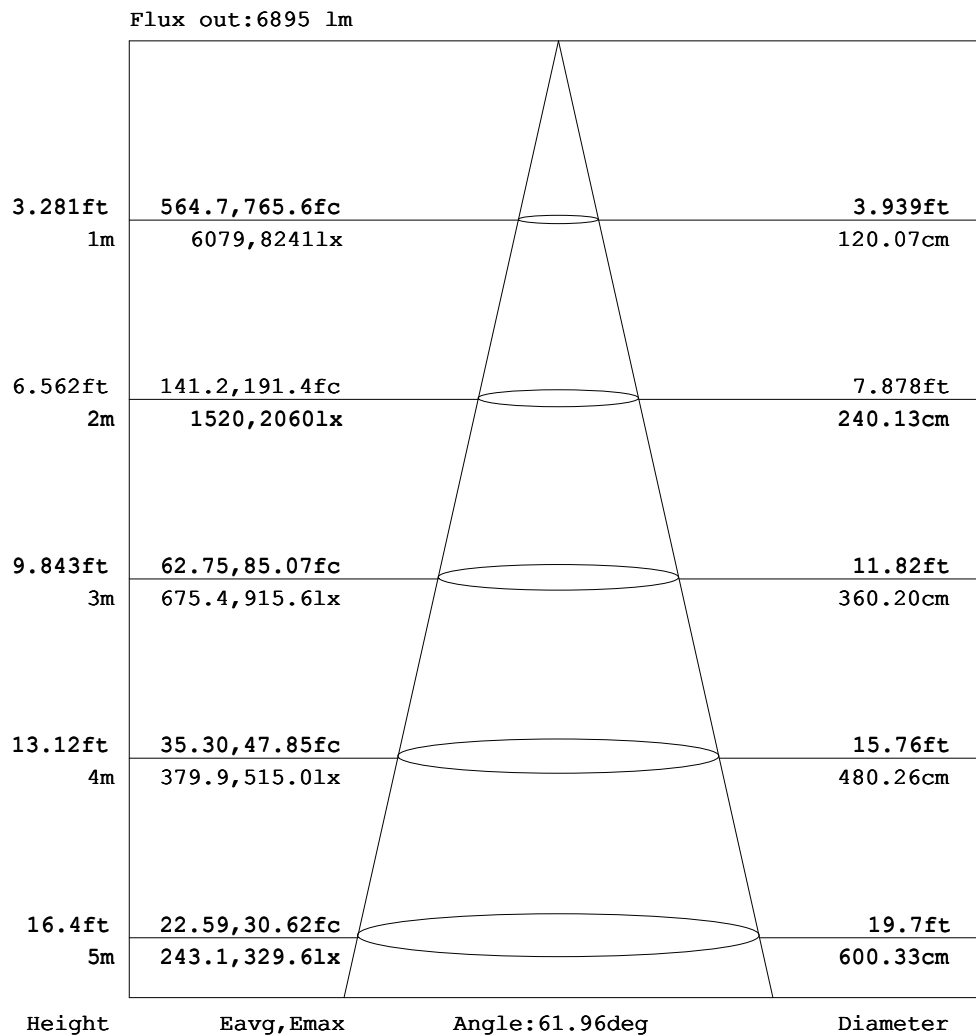


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-06-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm		
NAME: BT-LON-150W	TYPE:LENS	WEIGHT:3.8kg
SPEC.:5000K R80 60LEDs 60X100D	DIM.: D260*H184mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:



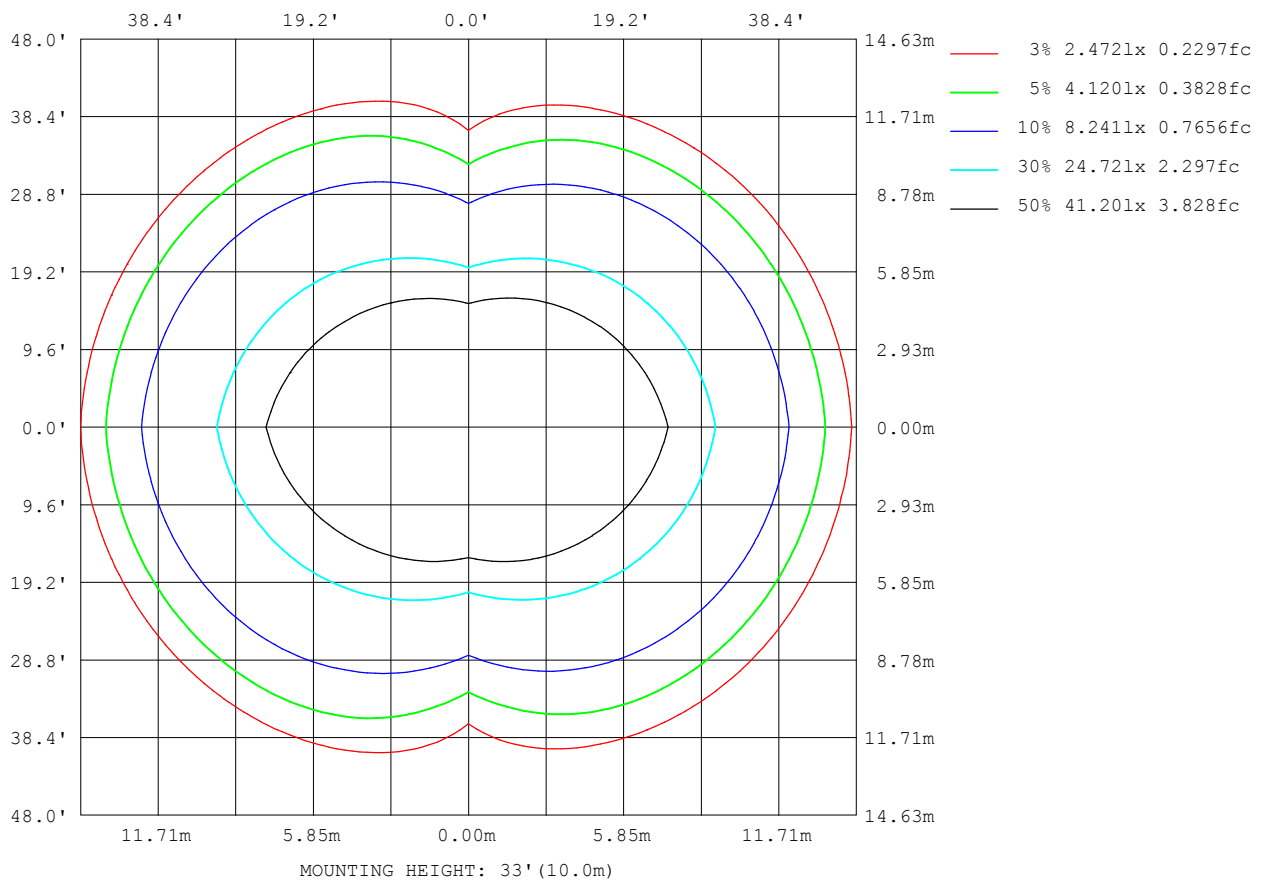
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-06-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

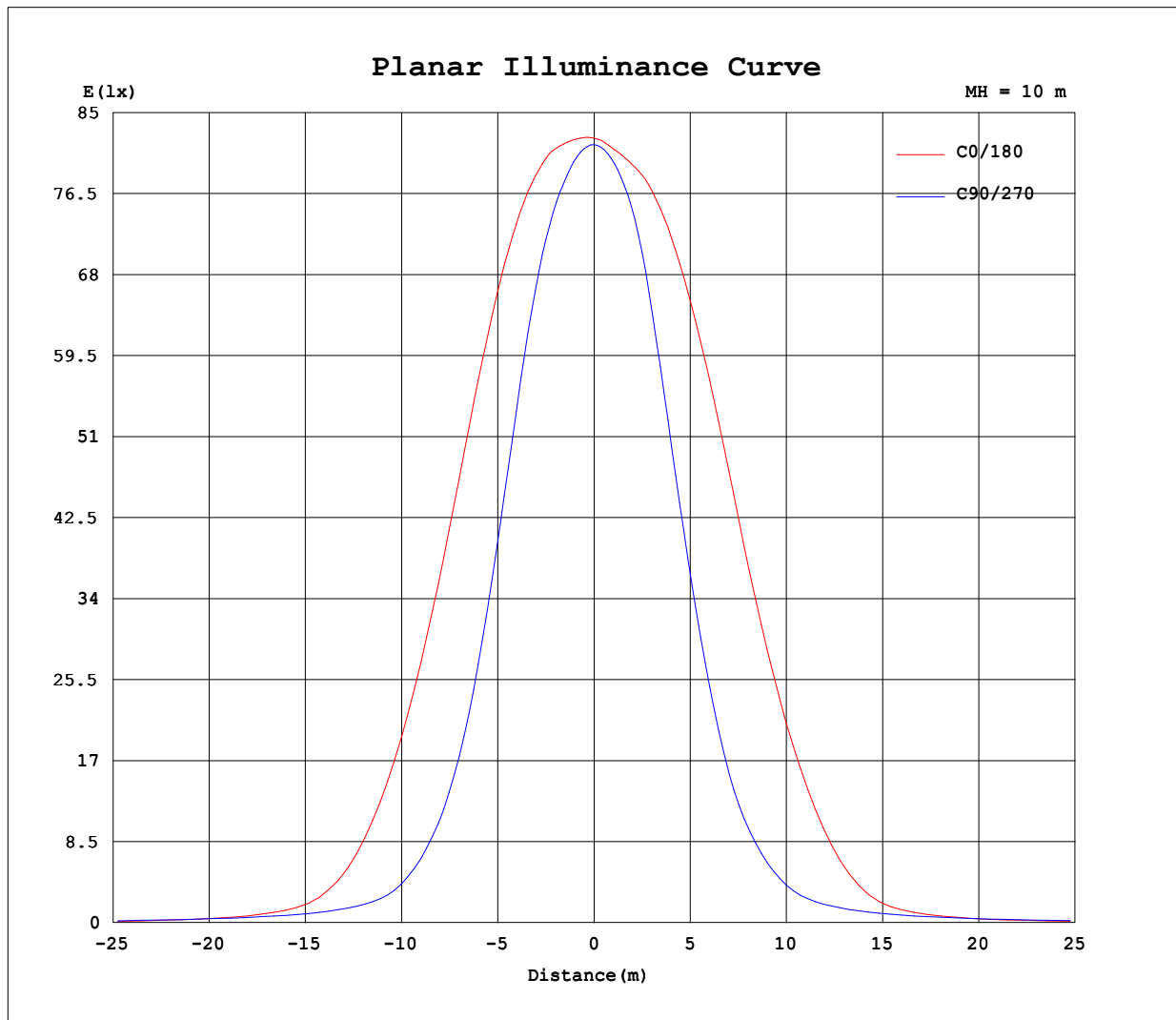
Test:U:220.9V I:0.6915A P:148.7W PF:0.9737 Lamp Flux:14724.8x1 lm		
NAME: BT-LON-150W	TYPE: LENS	WEIGHT: 3.8kg
SPEC.: 5000K R80 60LEDs 60X100D	DIM.: D260*H184mm	SERIAL No.:
MFR.: EVERFINE	SUR.: 163*163mm	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-06-05

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

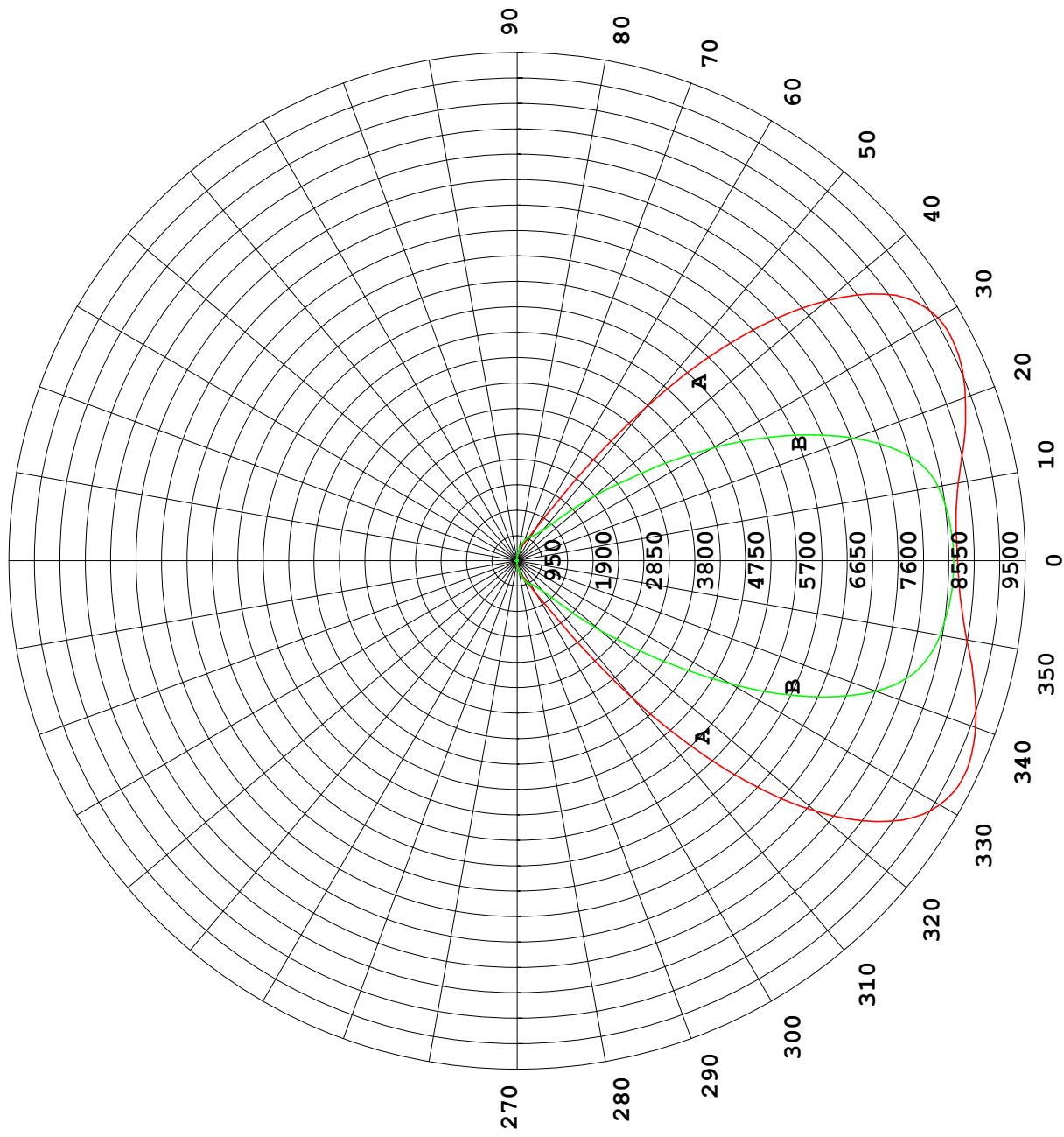
Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-06-05

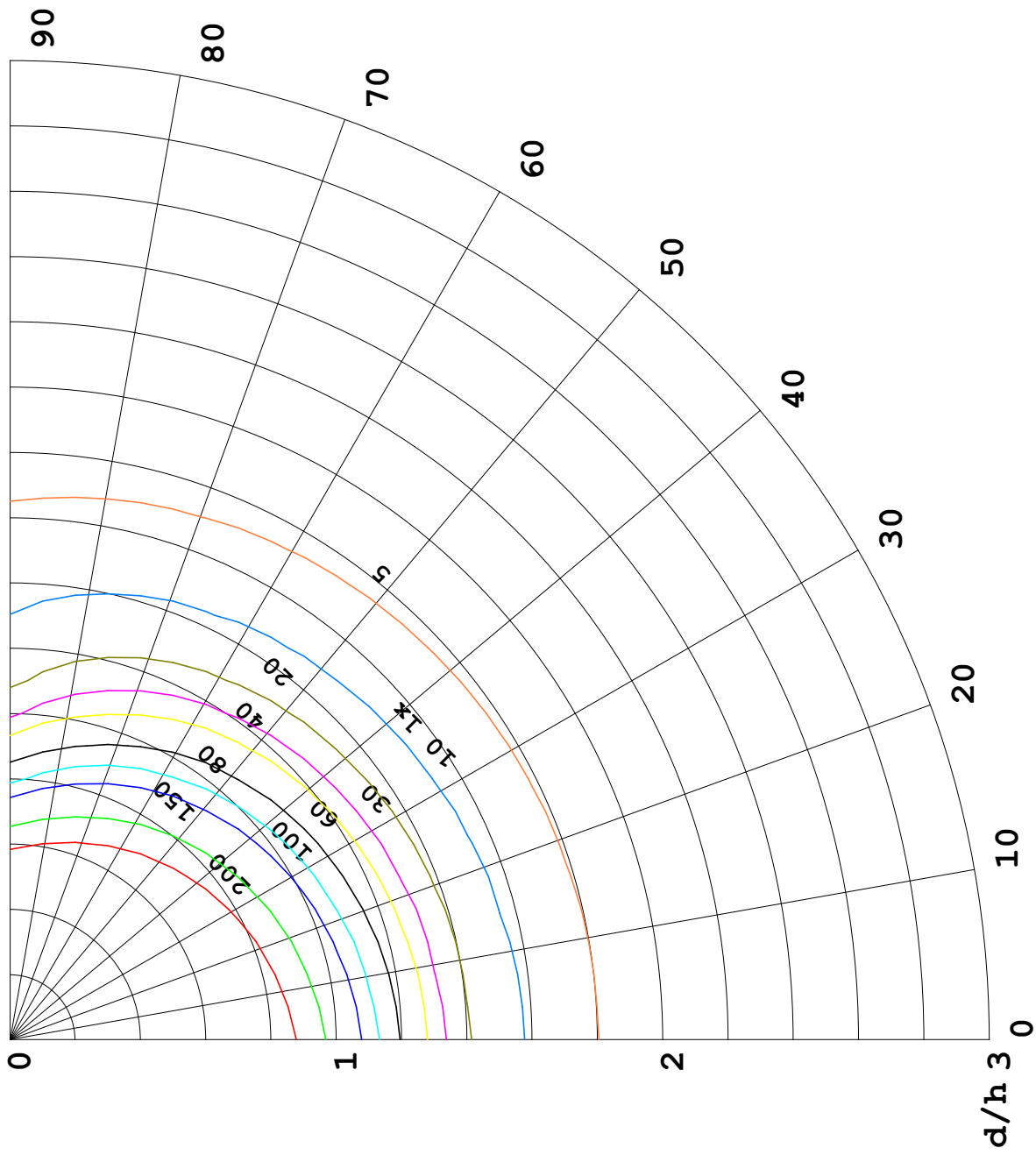
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

I (cd)



$\kappa = 1$

1000 lm



F = 5000 lm
 K = 0.7
 Hcc = 0.0 m
 Hfc = 0.0 m
 Eave = 100 lx

	Pcc	Pw	Pfc
————	70	50	30
————	50	30	20

