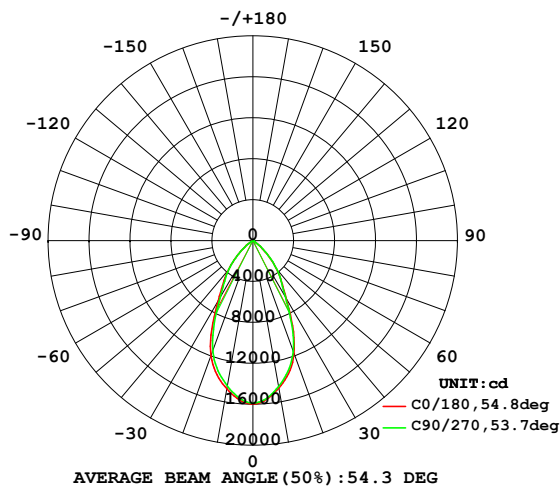


LUMINAIRE PHOTOMETRIC TEST REPORT

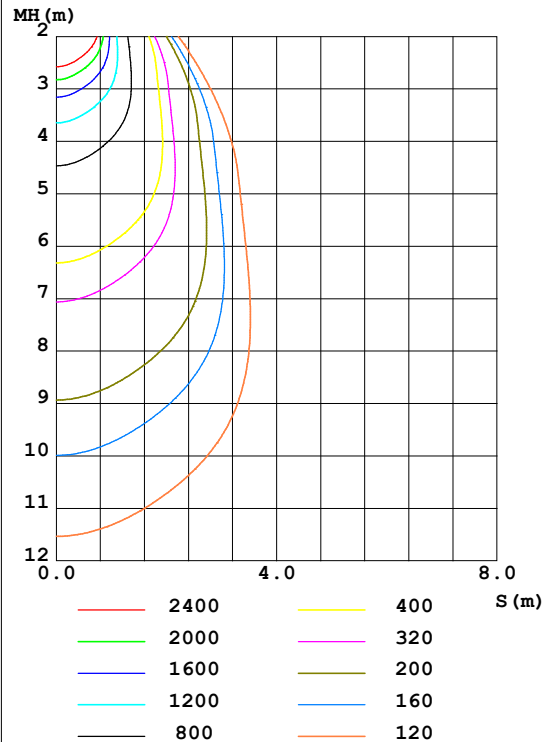
Test:U:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:60D	DIM.: 355*325mm	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 92.87 lm/W
MODEL	SMD3030	I _{max} (cd)	15968	S/MH(C0/180)	0.85	
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.84	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	14848	η UP,DN(C0-180)	0.2,49.3	
NOMINAL FLUX(lm)	14847.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,50.2	
LAMPS INSIDE	1	η up(%)	0.5	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	220	η down(%)	99.5	CIBSE SHR MAX	0.85	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:VISION
 Test Date:2015-6-19

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	1463	1448	1471	1442					0- 10	1450	1450	9.77,9.77
20	1177	1152	1202	1148					10- 20	3723	5173	34.8,34.8
30	654.5	637.5	681.2	643.4					20- 30	4159	9332	62.9,62.9
40	358.7	363.0	374.1	366.3					30- 40	3084	12416	83.6,83.6
50	122.3	129.9	132.3	132.2					40- 50	1827	14244	95.9,95.9
60	2.492	3.866	3.971	3.752					50- 60	488.3	14732	99.2,99.2
70	1.581	1.531	1.579	1.472					60- 70	17.97	14750	99.3,99.3
80	1.430	1.466	1.473	1.462					70- 80	15.63	14765	99.4,99.4
90	1.262	1.289	1.293	1.318					80- 90	15.37	14781	99.5,99.5
100	0.0697	0.0664	0.1272	0.0953					90-100	8.366	14789	99.6,99.6
110	0.3257	0.3268	0.2192	0.2663					100-110	1.113	14790	99.6,99.6
120	0.6118	0.6136	0.4640	0.4637					110-120	4.347	14795	99.6,99.6
130	1.025	1.012	0.7064	0.7037					120-130	6.063	14801	99.7,99.7
140	1.756	1.711	1.243	1.235					130-140	8.812	14809	99.7,99.7
150	2.650	2.605	2.058	2.082					140-150	11.84	14821	99.8,99.8
160	3.519	3.499	2.910	2.908					150-160	12.84	14834	99.9,99.9
170	4.092	4.094	3.603	3.573					160-170	9.925	14844	100,100
180	4.282	4.253	4.298	4.244					170-180	3.836	14848	100,100
DEG	LUMINOUS INTENSITY:×10cd MAX (Ii - Iavg)/Iavg (0-135) = 365.6 %									UNIT:lm		

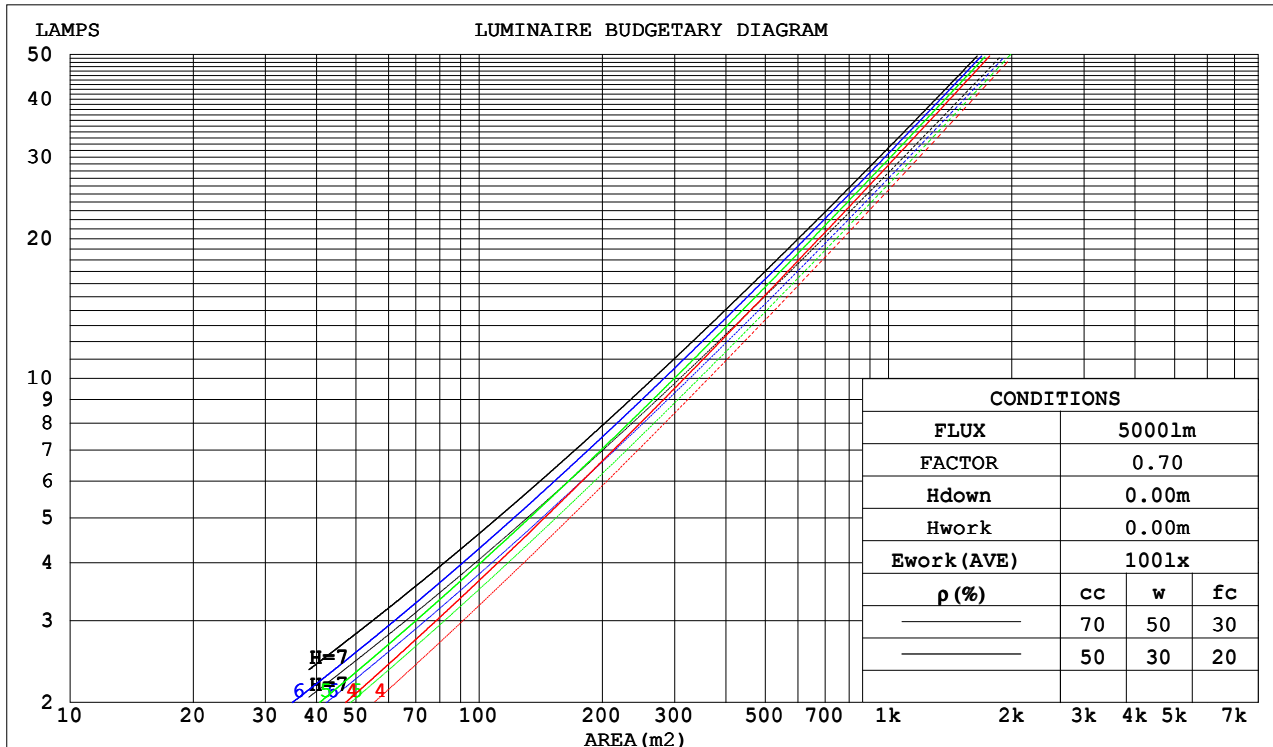
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:VISION
 Test Date:2015-6-19

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:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:60D	DIM.: 355*325mm	SERIAL No.:
MFR.: EVERFINE	SUR.:	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	1.10	1.08	1.05	1.08	1.06	1.03	1.04	1.02	1.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.82	.80	.78
4.0	.88	.82	.77	.86	.81	.77	.84	.79	.76	.82	.78	.75	.80	.77	.74	.72
5.0	.81	.75	.71	.80	.75	.70	.79	.73	.70	.77	.72	.69	.75	.71	.68	.67
6.0	.76	.70	.65	.75	.69	.65	.74	.68	.64	.72	.67	.64	.71	.67	.63	.62
7.0	.71	.65	.60	.70	.64	.60	.69	.64	.60	.68	.63	.59	.66	.62	.59	.57
8.0	.67	.60	.56	.66	.60	.56	.65	.59	.56	.64	.59	.55	.63	.58	.55	.54
9.0	.63	.56	.52	.62	.56	.52	.61	.56	.52	.60	.55	.52	.59	.55	.51	.50
10.0	.59	.53	.49	.59	.53	.49	.58	.52	.49	.57	.52	.48	.56	.52	.48	.47



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-6-19

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:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm														
NAME: BT-TH150W					TYPE:5000K					WEIGHT:				
SPEC.:60D					DIM.: 355*325mm					SERIAL No.:				
MFR.: EVERFINE					SUR.:					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	.188	.107	.034	.181	.103	.033	.168	.097	.031	.156	.090	.029	.145	.084	.027	
2.0	.181	.099	.030	.176	.097	.030	.165	.092	.028	.155	.087	.027	.145	.082	.026	
3.0	.173	.092	.028	.169	.090	.027	.159	.086	.026	.150	.082	.025	.142	.079	.024	
4.0	.166	.086	.025	.161	.084	.025	.153	.081	.024	.145	.078	.024	.138	.075	.023	
5.0	.158	.080	.023	.154	.079	.023	.147	.076	.023	.140	.074	.022	.134	.072	.022	
6.0	.151	.075	.022	.147	.074	.021	.141	.072	.021	.135	.070	.021	.129	.068	.020	
7.0	.144	.071	.020	.141	.070	.020	.135	.068	.020	.130	.067	.019	.125	.065	.019	
8.0	.137	.067	.019	.135	.066	.019	.130	.065	.018	.125	.063	.018	.120	.062	.018	
9.0	.131	.063	.018	.129	.063	.018	.124	.061	.017	.120	.060	.017	.116	.059	.017	
10.0	.126	.060	.017	.123	.060	.017	.119	.058	.016	.115	.057	.016	.112	.056	.016	

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	.175	.161	.147	.150	.138	.127	.103	.095	.088	.059	.055	.051	.019	.018	.017	
2.0	.161	.136	.115	.138	.117	.099	.095	.081	.069	.054	.047	.041	.017	.015	.013	
3.0	.149	.117	.091	.128	.101	.079	.088	.070	.056	.051	.041	.033	.016	.013	.011	
4.0	.140	.103	.074	.120	.089	.065	.082	.062	.045	.048	.036	.027	.015	.012	.009	
5.0	.132	.091	.061	.113	.079	.053	.078	.055	.038	.045	.032	.022	.015	.011	.007	
6.0	.124	.082	.052	.107	.071	.045	.074	.050	.032	.043	.029	.019	.014	.010	.006	
7.0	.118	.075	.044	.102	.065	.039	.070	.045	.027	.041	.027	.016	.013	.009	.005	
8.0	.113	.069	.038	.097	.060	.034	.067	.042	.024	.039	.025	.014	.013	.008	.005	
9.0	.107	.064	.034	.093	.055	.030	.064	.039	.021	.037	.023	.012	.012	.008	.004	
10.0	.103	.059	.030	.089	.051	.026	.062	.036	.019	.036	.021	.011	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-6-19

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:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm										
NAME: BT-TH150W					TYPE:5000K			WEIGHT:		
SPEC.:60D					DIM.: 355*325mm			SERIAL No.:		
MFR.: EVERFINE					SUR.:			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	24.8	25.9	25.1	26.0	26.2	24.9	25.9	25.1	26.1	26.3
3H	24.7	25.6	24.9	25.8	26.0	24.7	25.7	25.0	25.9	26.1
4H	24.6	25.4	24.8	25.7	25.9	24.6	25.5	24.9	25.8	26.0
6H	24.5	25.3	24.8	25.5	25.8	24.5	25.4	24.9	25.6	25.9
8H	24.4	25.2	24.7	25.5	25.8	24.5	25.3	24.8	25.6	25.8
12H	24.4	25.1	24.7	25.4	25.7	24.5	25.2	24.8	25.5	25.8
4H 2H	24.6	25.5	24.9	25.7	25.9	24.7	25.5	25.0	25.8	26.0
3H	24.4	25.2	24.7	25.4	25.7	24.5	25.2	24.8	25.5	25.8
4H	24.3	25.0	24.7	25.3	25.6	24.4	25.1	24.7	25.4	25.7
6H	24.2	24.8	24.6	25.2	25.5	24.3	24.9	24.7	25.2	25.6
8H	24.2	24.7	24.6	25.1	25.5	24.3	24.8	24.7	25.2	25.5
12H	24.1	24.6	24.6	25.0	25.4	24.2	24.7	24.6	25.1	25.5
8H 4H	24.2	24.7	24.6	25.1	25.5	24.2	24.8	24.6	25.2	25.5
6H	24.1	24.5	24.5	24.9	25.4	24.2	24.6	24.6	25.0	25.4
8H	24.0	24.4	24.5	24.9	25.3	24.1	24.5	24.6	24.9	25.4
12H	24.0	24.3	24.5	24.8	25.3	24.1	24.4	24.5	24.9	25.3
12H 4H	24.1	24.6	24.5	25.0	25.4	24.2	24.7	24.6	25.1	25.5
6H	24.0	24.4	24.5	24.8	25.3	24.1	24.5	24.6	24.9	25.4
8H	24.0	24.3	24.5	24.8	25.3	24.1	24.4	24.5	24.8	25.3
Variations with the observer position at spacings:										
S = 1.0H	+ 2.5 / -11.3					+ 2.4 / -10.7				
1.5H	+ 2.9 / - 6.8					+ 2.8 / - 6.5				
2.0H	+ 5.7 / -14.8					+ 5.7 / -15.0				

CIE Pub.117 Corrected 14848 lm Total Lamp Luminous Flux. (8log(F/F0) = 9.4)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-6-19

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:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:60D	DIM.: 355*325mm	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

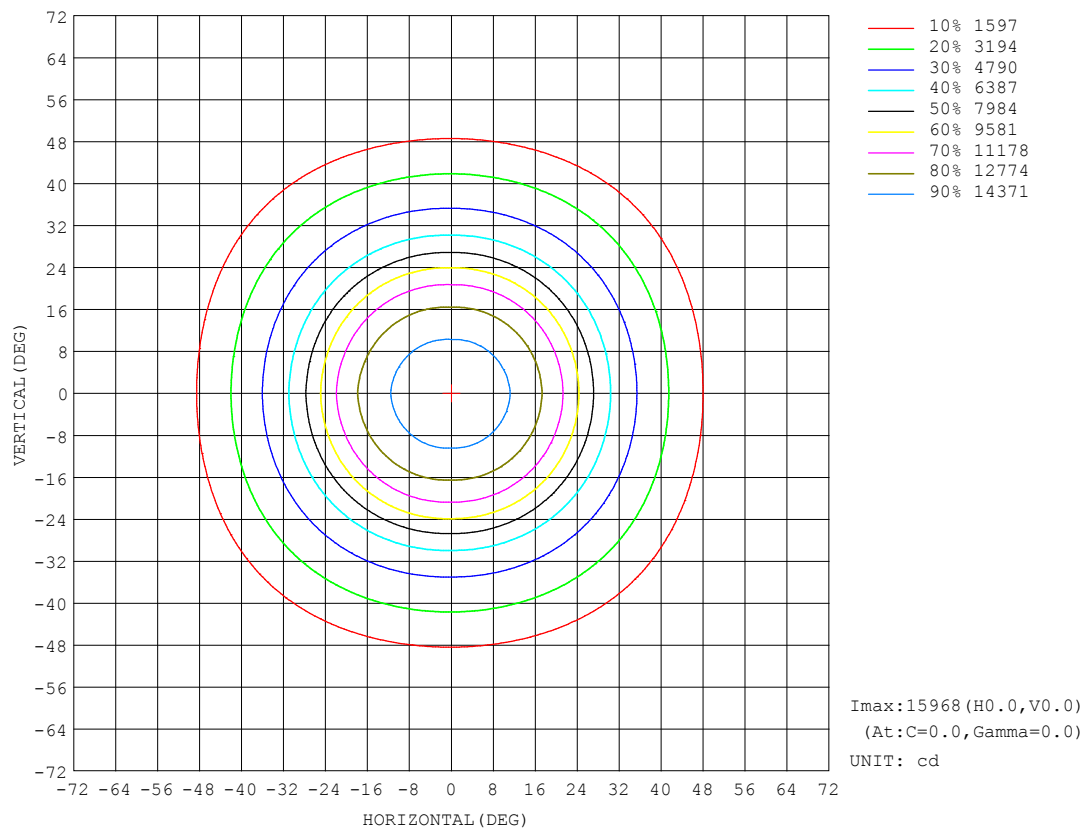
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	81	74	69	80	73	69	80	73	69	65
0.80	90	83	78	89	82	78	87	82	78	73
1.00	95	89	85	94	88	84	93	88	84	79
1.25	100	94	90	99	94	90	97	92	89	84
1.50	103	98	94	102	97	94	100	96	93	88
2.00	107	102	99	105	101	98	102	99	96	91
2.50	109	104	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	102	100	94
4.00	113	109	107	111	108	106	107	105	103	95
5.00	114	111	109	112	109	107	108	106	104	96
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:VISION
Test Date:2015-6-19

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:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:60D	DIM.: 355*325mm	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

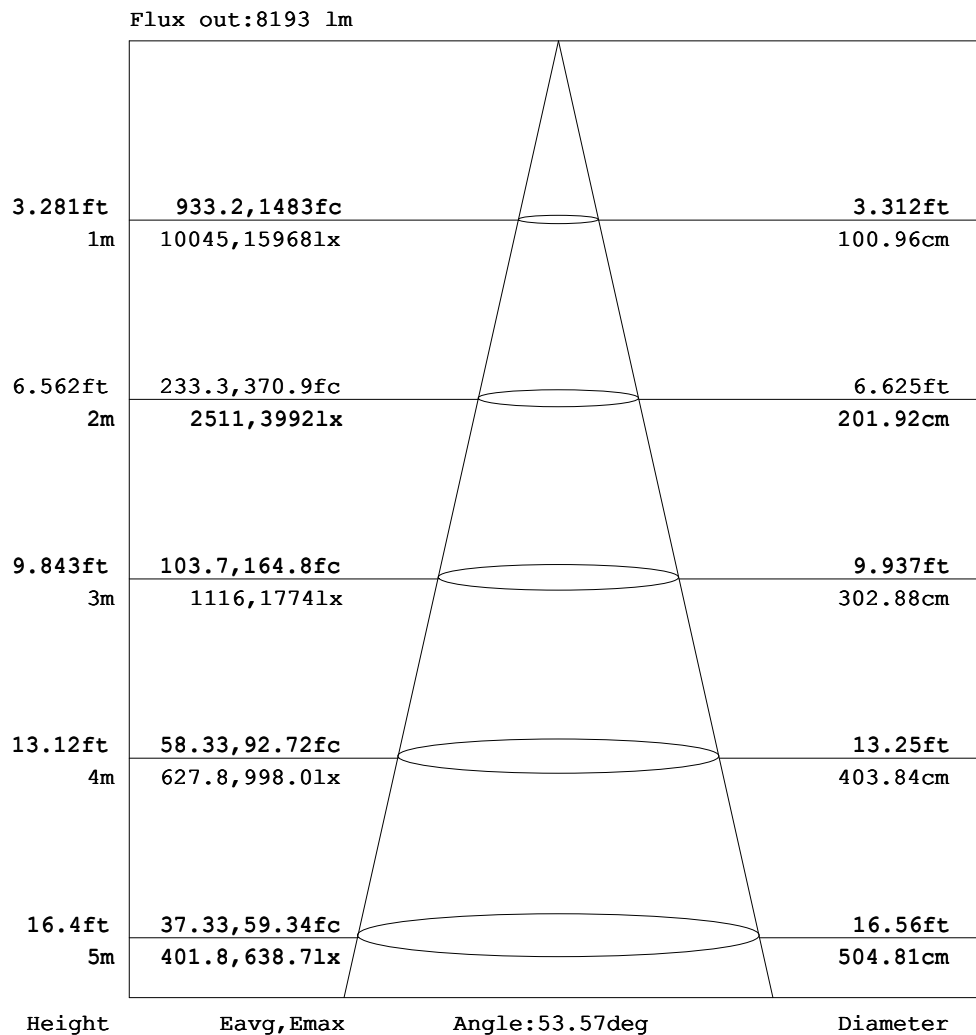


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-6-19

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:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:60D	DIM.: 355*325mm	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:



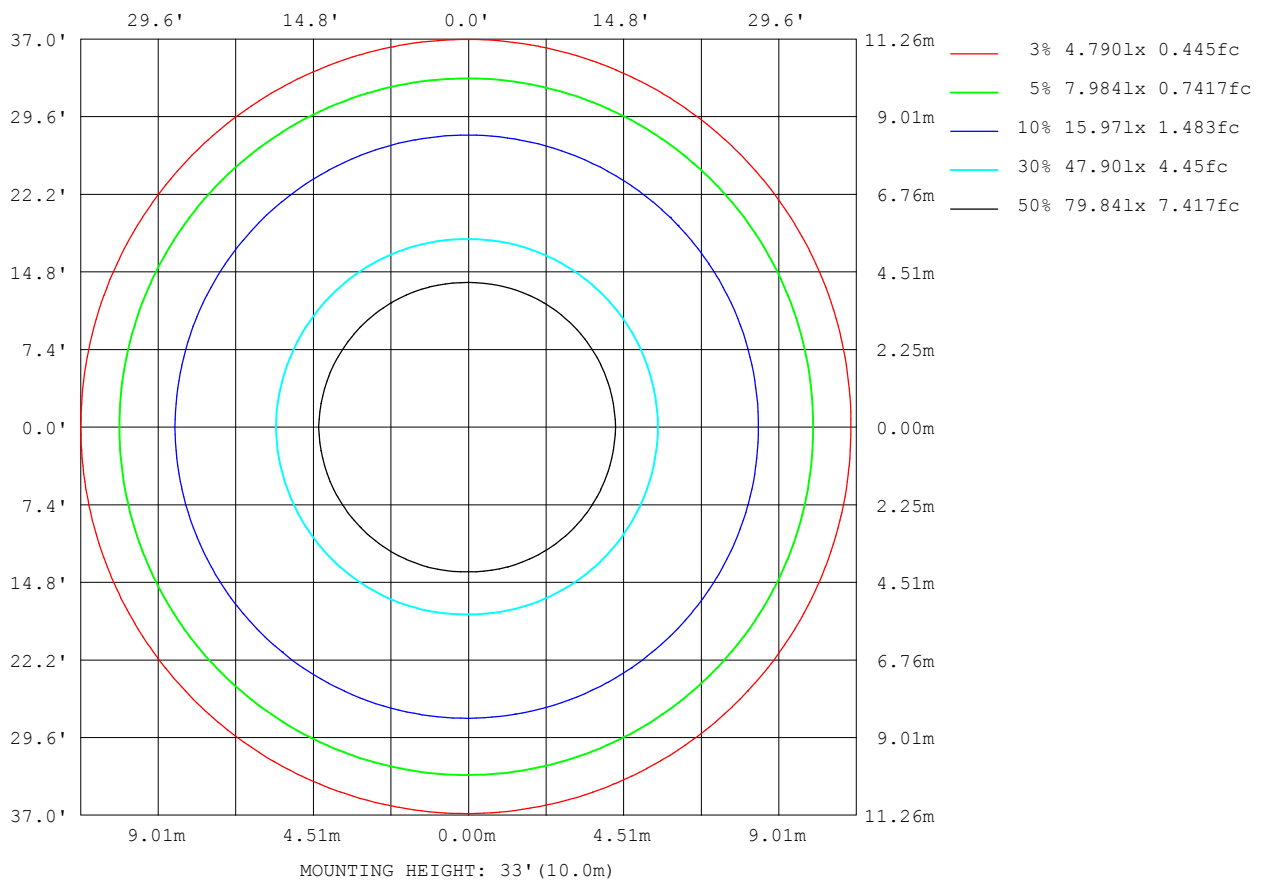
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-6-19

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

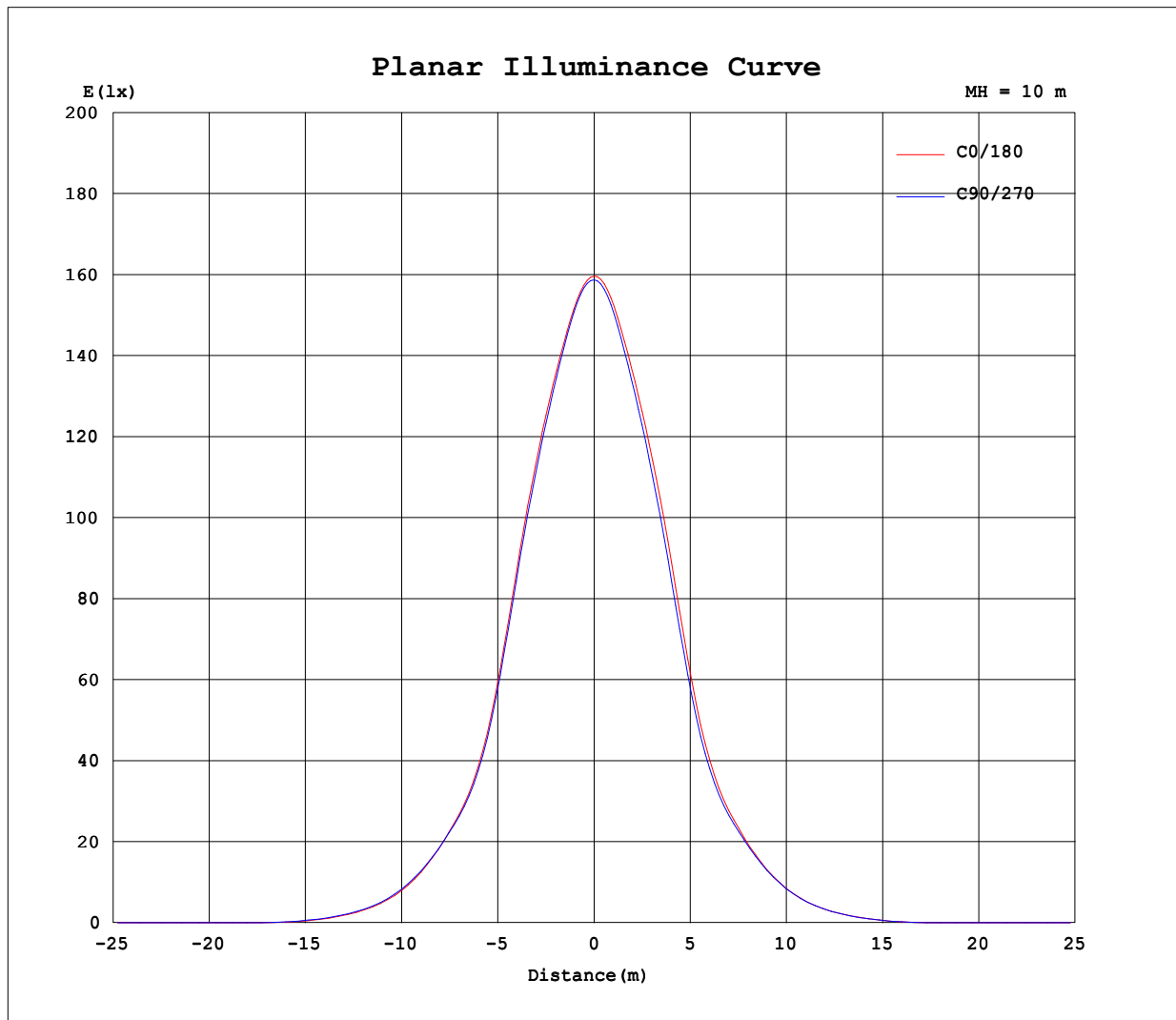
Test:U:220.8V I:0.7432A P:159.9W PF:0.9743 Lamp Flux:14847.9x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:60D	DIM.: 355*325mm	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-6-19

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:

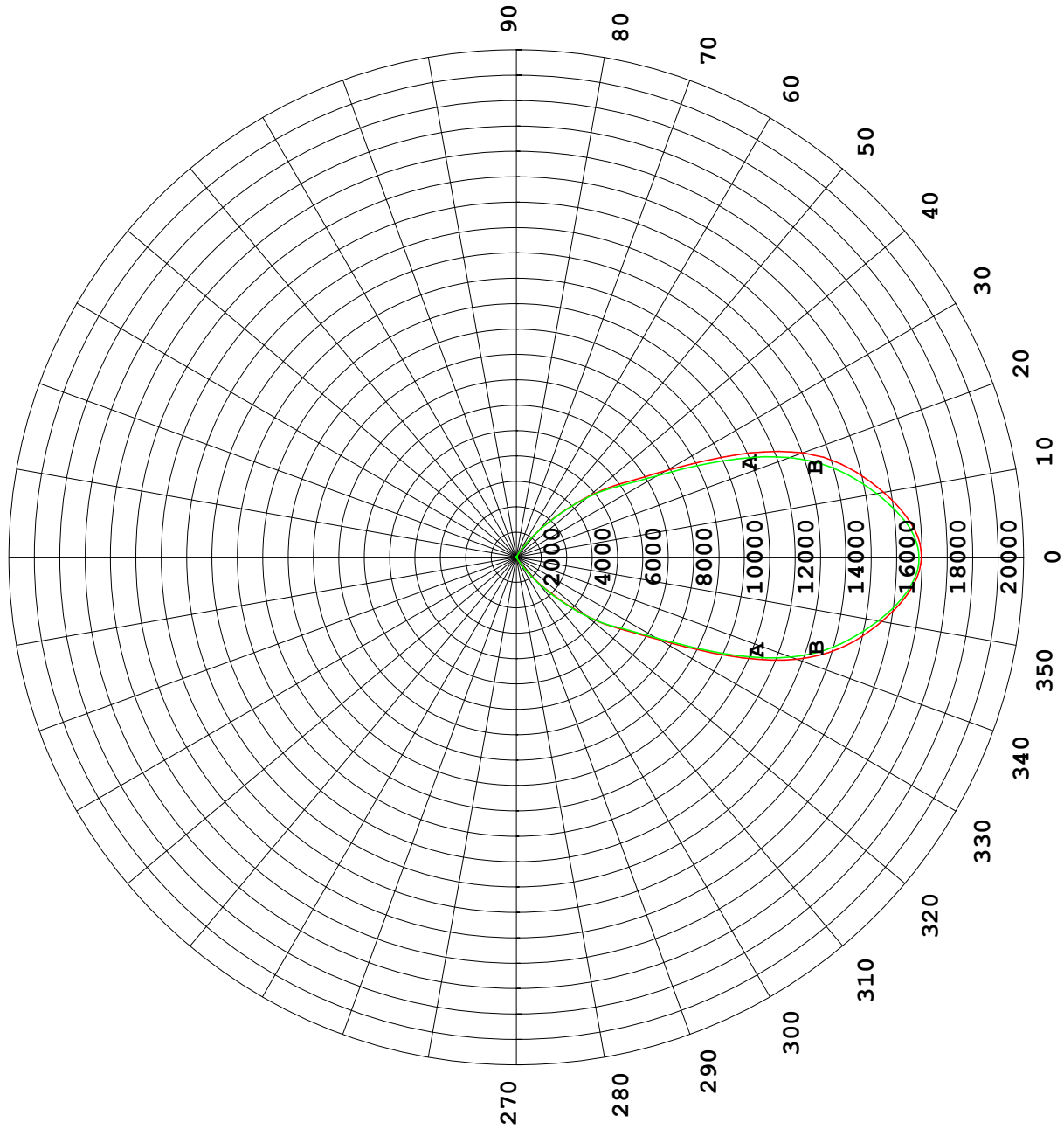
Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators: VISION
Test Date: 2015-6-19

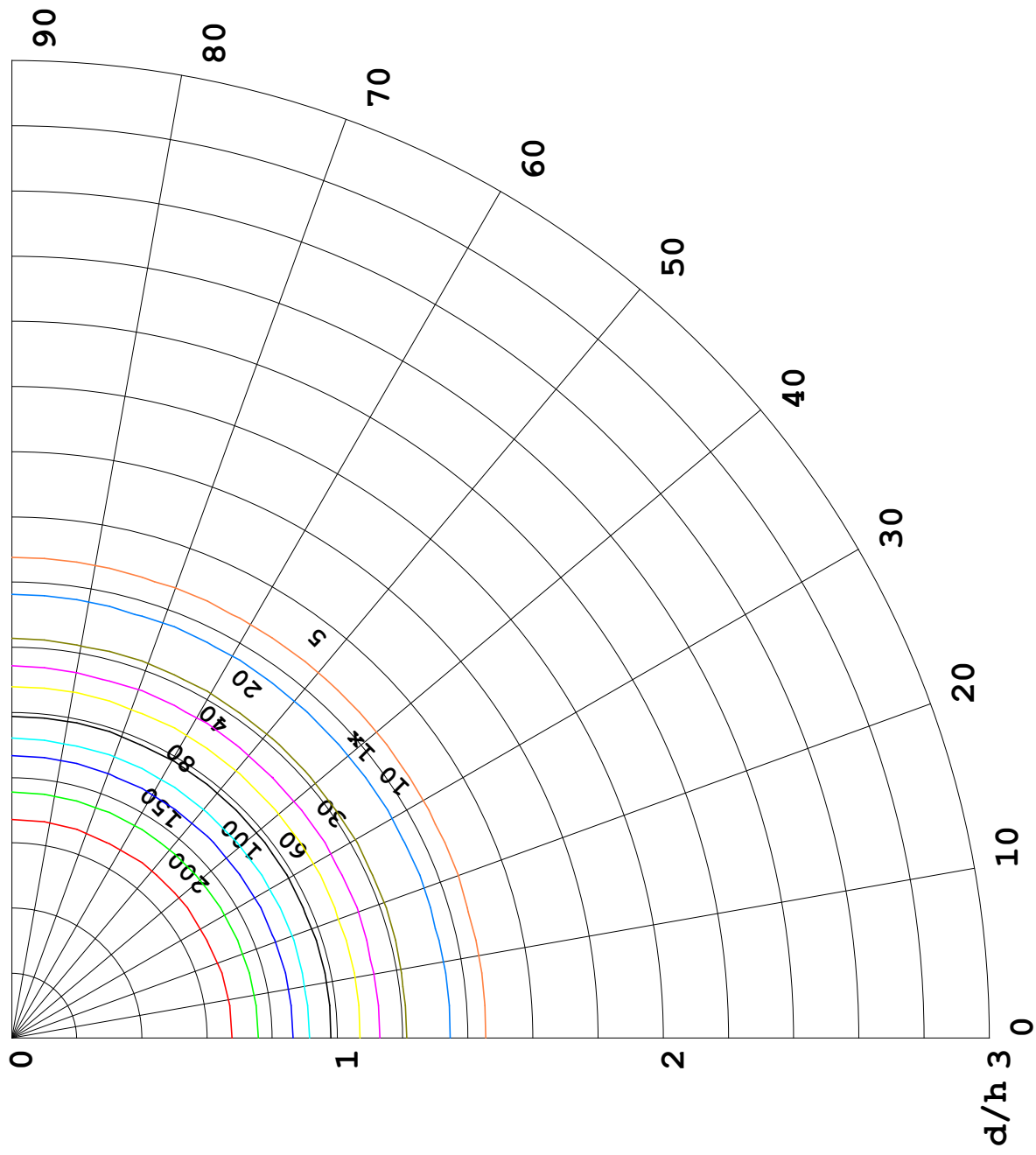
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

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

