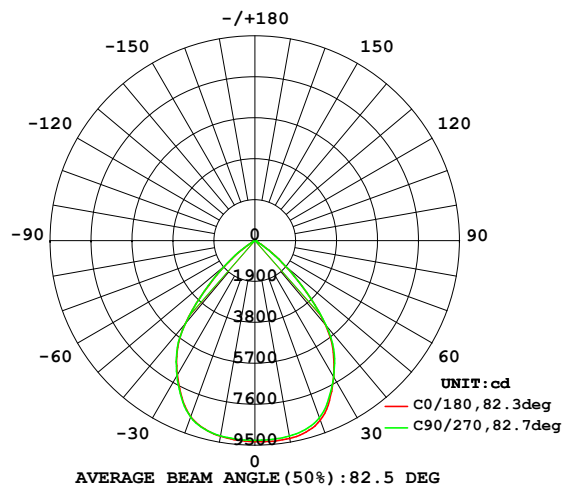


LUMINAIRE PHOTOMETRIC TEST REPORT

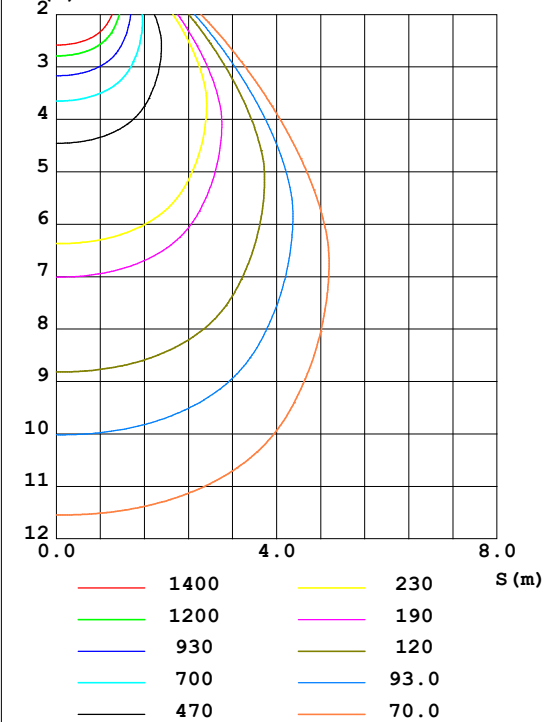
Test:U:220.8V I:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:90D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 91.57 lm/W
MODEL	SMD3030	I _{max} (cd)	9345	S/MH(C0/180)	1.16	
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.17	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	14644	η UP,DN(C0-180)	0.3,50.1	
NOMINAL FLUX(lm)	14644.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,49.4	
LAMPS INSIDE	1	η up(%)	0.5	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	220	η down(%)	99.5	CIBSE SHR MAX	1.25	

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:2015-06-19

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	9321	9210	9220	9202					0- 10	885.1	885.1	6.04, 6.04
20	8873	8755	8705	8722					10- 20	2562	3447	23.5, 23.5
30	7309	7319	7204	7240					20- 30	3715	7162	48.9, 48.9
40	5084	5129	5026	5025					30- 40	3926	11088	75.7, 75.7
50	1899	1906	1827	1878					40- 50	2599	13687	93.5, 93.5
60	175.3	157.7	138.9	181.4					50- 60	760.5	14447	98.7, 98.7
70	36.74	37.50	37.11	44.08					60- 70	72.33	14520	99.2, 99.2
80	22.79	23.41	23.86	25.94					70- 80	31.55	14551	99.4, 99.4
90	14.84	14.41	15.23	15.86					80- 90	21.37	14573	99.5, 99.5
100	3.271	2.631	2.743	3.979					90-100	11.08	14584	99.6, 99.6
110	3.389	3.997	2.534	2.726					100-110	1.915	14586	99.6, 99.6
120	8.436	8.412	6.194	6.943					110-120	5.529	14591	99.6, 99.6
130	13.12	13.05	9.594	10.15					120-130	8.349	14600	99.7, 99.7
140	18.73	18.81	14.72	14.73					130-140	10.84	14610	99.8, 99.8
150	23.20	23.33	20.25	20.03					140-150	12.00	14622	99.9, 99.9
160	27.31	27.47	24.60	24.25					150-160	11.03	14633	99.9, 99.9
170	30.48	30.57	28.45	28.08					160-170	7.792	14641	100, 100
180	31.80	31.82	32.01	31.72					170-180	2.903	14644	100, 100
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 238.0 %									UNIT:lm		

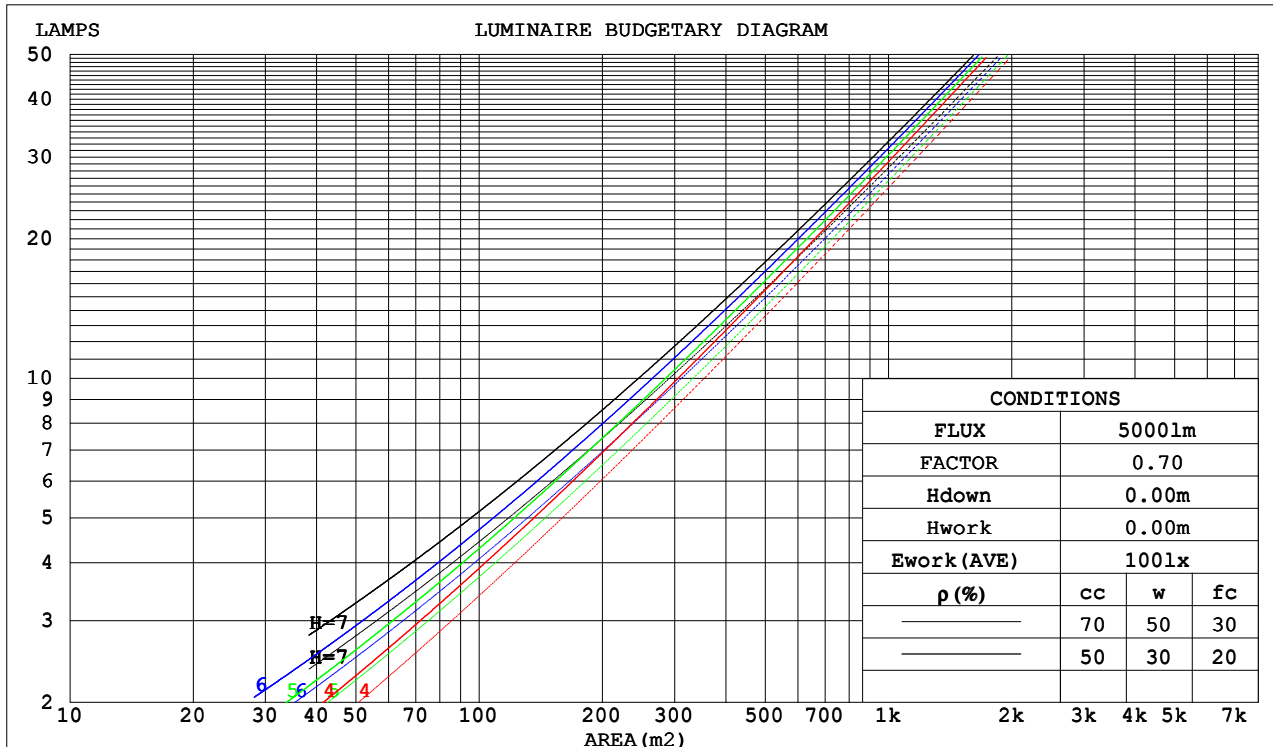
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:90D	DIM.:	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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.86	.84	.82
3.0	.91	.86	.81	.90	.85	.80	.87	.83	.79	.85	.81	.77	.82	.79	.76	.74
4.0	.84	.77	.72	.83	.76	.72	.80	.75	.71	.78	.74	.70	.76	.72	.69	.67
5.0	.77	.70	.65	.76	.69	.65	.74	.68	.64	.72	.67	.63	.70	.66	.63	.61
6.0	.71	.64	.59	.70	.63	.59	.68	.62	.58	.67	.62	.58	.65	.61	.57	.55
7.0	.65	.58	.53	.65	.58	.53	.63	.57	.53	.62	.57	.53	.61	.56	.52	.51
8.0	.61	.54	.49	.60	.53	.49	.59	.53	.48	.58	.52	.48	.57	.52	.48	.46
9.0	.56	.49	.45	.56	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.43
10.0	.53	.46	.41	.52	.46	.41	.51	.45	.41	.50	.45	.41	.49	.44	.41	.39



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm														
NAME: BT-TH150W					TYPE:5000K					WEIGHT:				
SPEC.:90D					DIM.:					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	.205	.117	.037	.198	.113	.036	.185	.106	.034	.174	.100	.032	.162	.094	.030				
2.0	.200	.110	.034	.194	.107	.033	.183	.102	.032	.173	.097	.030	.163	.092	.029				
3.0	.192	.102	.031	.187	.100	.030	.177	.096	.029	.168	.092	.028	.160	.089	.027				
4.0	.184	.095	.028	.179	.094	.028	.171	.090	.027	.163	.087	.026	.155	.084	.026				
5.0	.175	.089	.026	.171	.088	.026	.164	.085	.025	.157	.083	.025	.150	.080	.024				
6.0	.167	.084	.024	.163	.083	.024	.157	.080	.023	.150	.078	.023	.145	.076	.023				
7.0	.159	.079	.022	.156	.078	.022	.150	.076	.022	.144	.074	.022	.139	.072	.021				
8.0	.152	.074	.021	.149	.073	.021	.143	.072	.020	.138	.070	.020	.134	.069	.020				
9.0	.145	.070	.020	.142	.069	.019	.137	.068	.019	.133	.067	.019	.129	.065	.019				
10.0	.138	.066	.018	.136	.066	.018	.132	.064	.018	.127	.063	.018	.124	.062	.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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.177	.161	.146	.151	.138	.126	.103	.095	.087	.060	.055	.051	.019	.018	.016	
2.0	.164	.136	.113	.140	.117	.098	.096	.081	.068	.055	.047	.040	.018	.015	.013	
3.0	.153	.118	.089	.131	.101	.077	.090	.070	.054	.052	.041	.032	.017	.013	.010	
4.0	.144	.103	.072	.124	.089	.062	.085	.062	.044	.049	.036	.026	.016	.012	.009	
5.0	.137	.092	.059	.118	.080	.052	.081	.056	.036	.047	.033	.022	.015	.011	.007	
6.0	.130	.083	.050	.112	.072	.043	.077	.051	.031	.045	.030	.018	.014	.010	.006	
7.0	.124	.076	.042	.107	.066	.037	.074	.046	.026	.043	.027	.016	.014	.009	.005	
8.0	.119	.070	.037	.102	.061	.032	.071	.043	.023	.041	.025	.014	.013	.008	.005	
9.0	.114	.065	.033	.098	.057	.028	.068	.040	.020	.040	.024	.012	.013	.008	.004	
10.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm										
NAME: BT-TH150W					TYPE:5000K			WEIGHT:		
SPEC.:90D					DIM.:			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	27.3	28.5	27.6	28.7	28.8	27.3	28.5	27.6	28.7	28.9
3H	27.1	28.2	27.4	28.4	28.6	27.2	28.2	27.4	28.4	28.6
4H	27.0	28.0	27.3	28.3	28.5	27.1	28.1	27.4	28.3	28.5
6H	27.0	27.9	27.3	28.1	28.4	27.0	27.9	27.3	28.2	28.4
8H	26.9	27.8	27.2	28.1	28.3	26.9	27.8	27.3	28.1	28.4
12H	26.9	27.7	27.2	28.0	28.3	26.9	27.7	27.2	28.0	28.3
4H 2H	27.1	28.1	27.4	28.3	28.5	27.1	28.1	27.4	28.3	28.6
3H	26.9	27.7	27.2	28.0	28.3	26.9	27.8	27.3	28.0	28.3
4H	26.8	27.6	27.2	27.9	28.2	26.8	27.6	27.2	27.9	28.2
6H	26.7	27.4	27.1	27.7	28.1	26.7	27.4	27.1	27.8	28.1
8H	26.7	27.3	27.1	27.7	28.0	26.7	27.3	27.1	27.7	28.1
12H	26.6	27.2	27.1	27.6	28.0	26.7	27.2	27.1	27.6	28.0
8H 4H	26.7	27.3	27.1	27.6	28.0	26.7	27.3	27.1	27.7	28.1
6H	26.6	27.1	27.0	27.5	27.9	26.6	27.1	27.0	27.5	27.9
8H	26.5	27.0	27.0	27.4	27.9	26.6	27.0	27.0	27.4	27.9
12H	26.5	26.9	27.0	27.3	27.8	26.5	26.9	27.0	27.4	27.8
12H 4H	26.6	27.2	27.0	27.6	28.0	26.6	27.2	27.1	27.6	28.0
6H	26.5	27.0	27.0	27.4	27.9	26.6	27.0	27.0	27.4	27.9
8H	26.5	26.9	27.0	27.3	27.8	26.5	26.9	27.0	27.3	27.8
Variations with the observer position at spacings:										
S = 1.0H	+ 2.4 / - 8.4					+ 2.4 / - 8.5				
1.5H	+ 2.5 / - 5.5					+ 2.5 / - 5.6				
2.0H	+ 5.4 / -12.7					+ 5.5 / -12.6				

CIE Pub.117 Corrected 14644 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.3)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:90D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

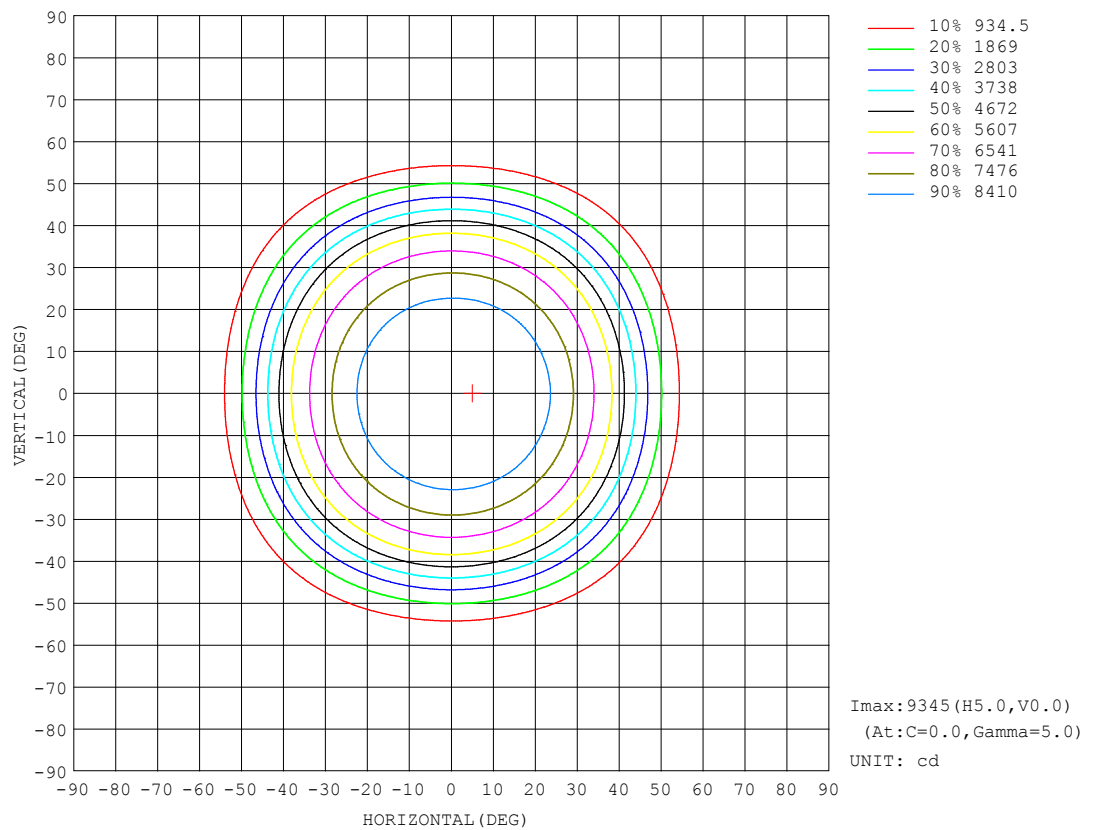
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	68	63	75	67	62	74	67	62	58
0.80	85	77	72	84	77	72	83	76	72	67
1.00	92	85	80	91	84	80	89	85	79	74
1.25	98	91	87	96	90	86	94	89	85	80
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	104	99	95	101	97	94	88
2.50	107	103	99	106	101	98	102	99	96	90
3.00	109	105	102	107	104	101	104	101	98	91
4.00	112	108	105	110	106	104	106	103	101	93
5.00	113	110	108	111	108	106	107	105	103	95
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:2015-06-19

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:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:90D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

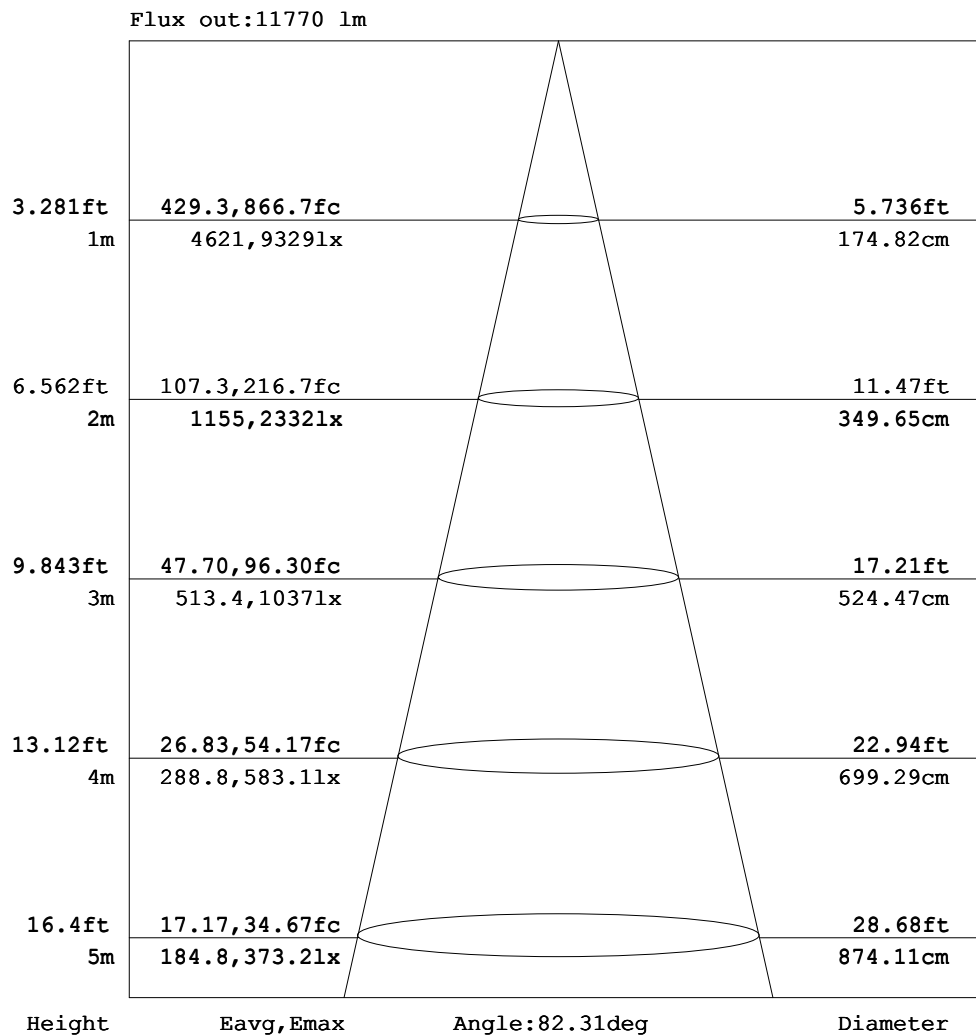


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators: VISION
 Test Date: 2015-06-19

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:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:90D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:



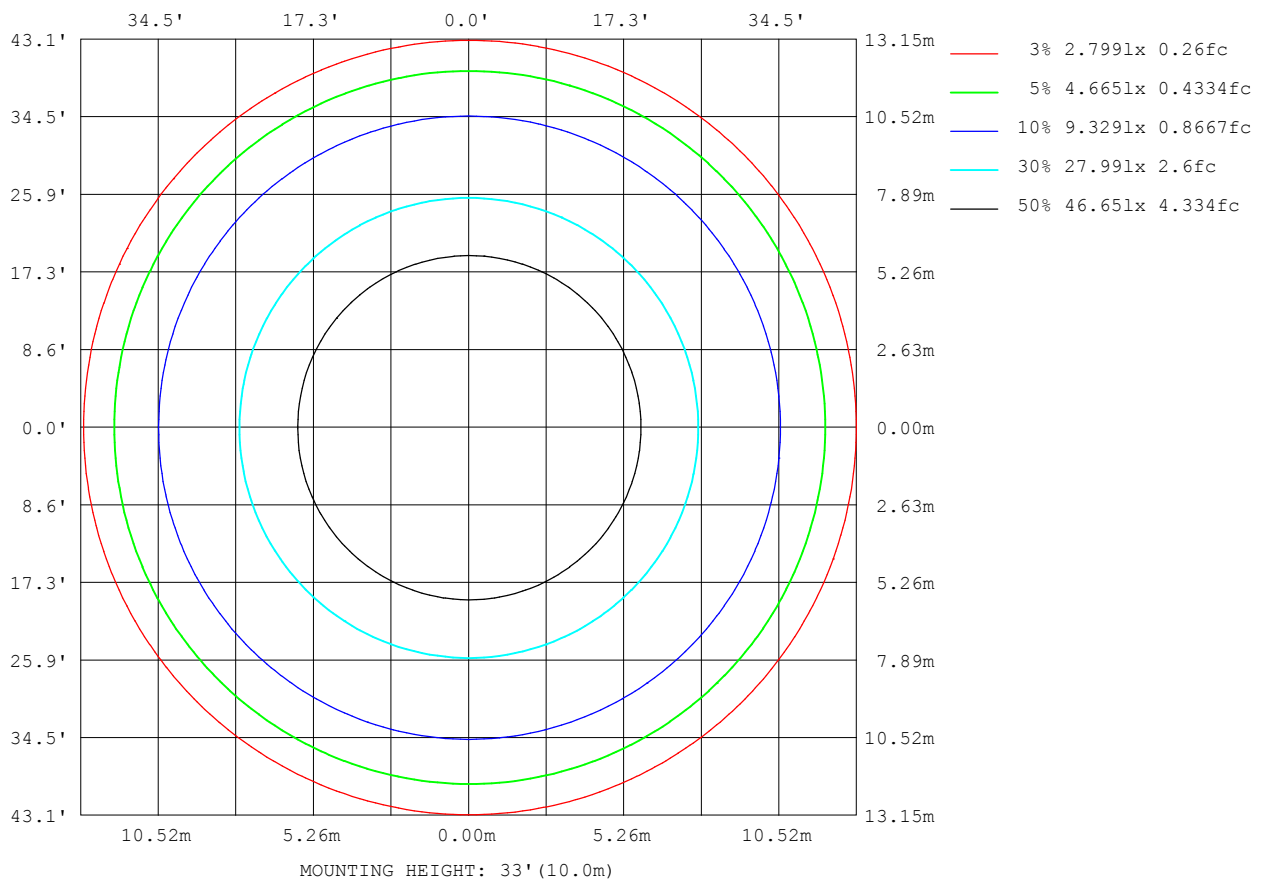
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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

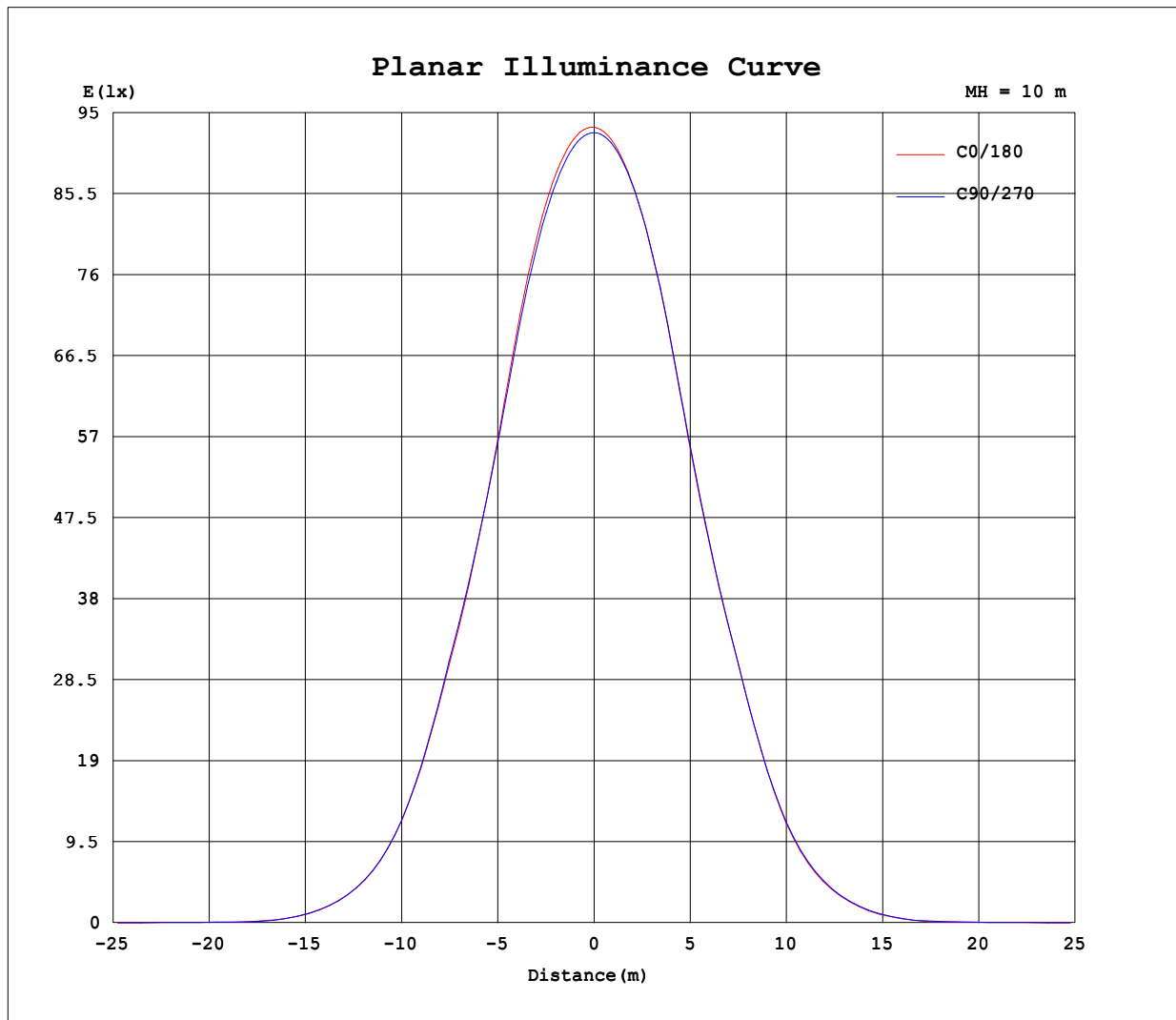
Test:U:220.8V I:0.7435A P:159.9W PF:0.9744 Lamp Flux:14644.1x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:90D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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:

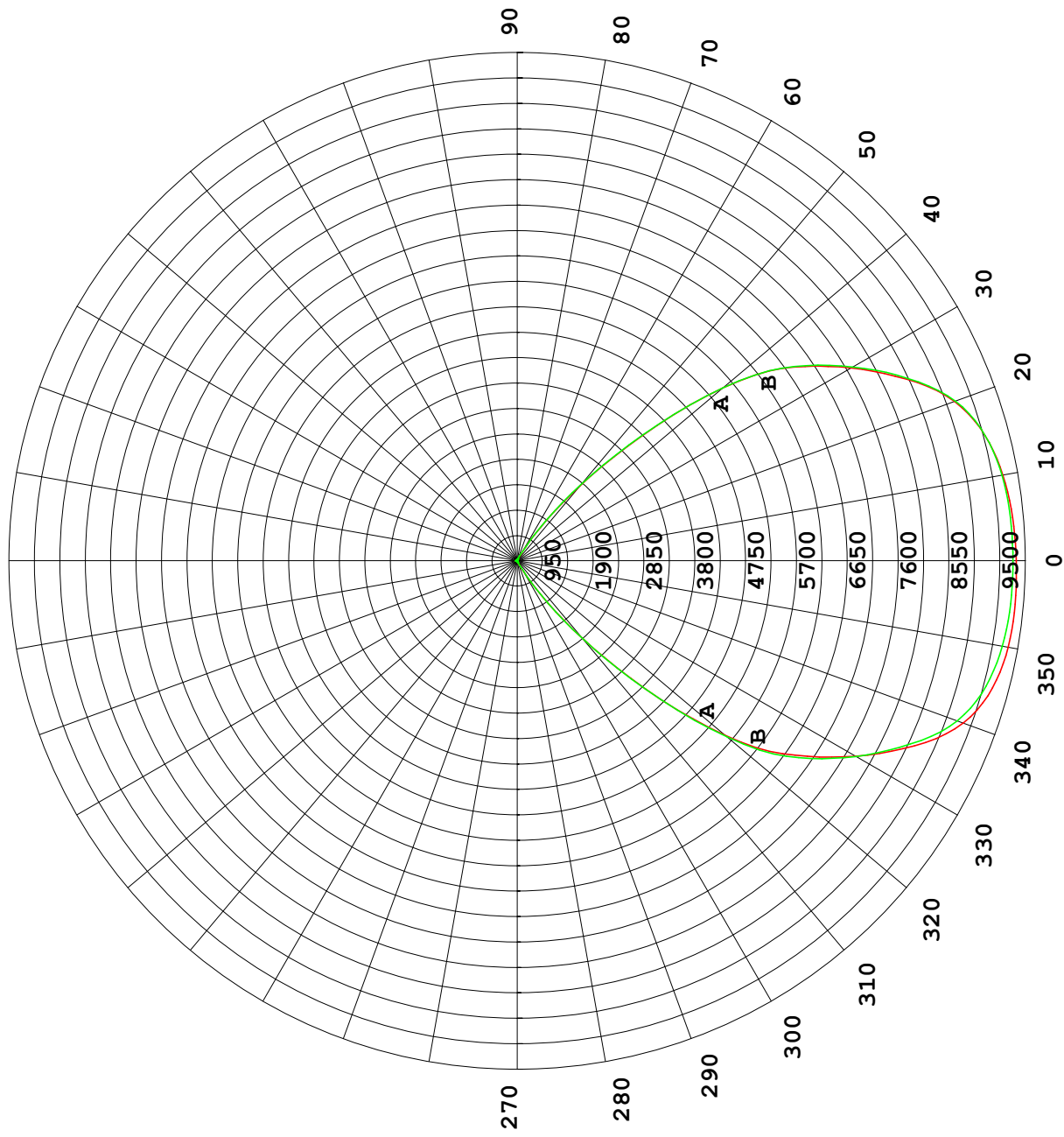
Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators: VISION
Test Date: 2015-06-19

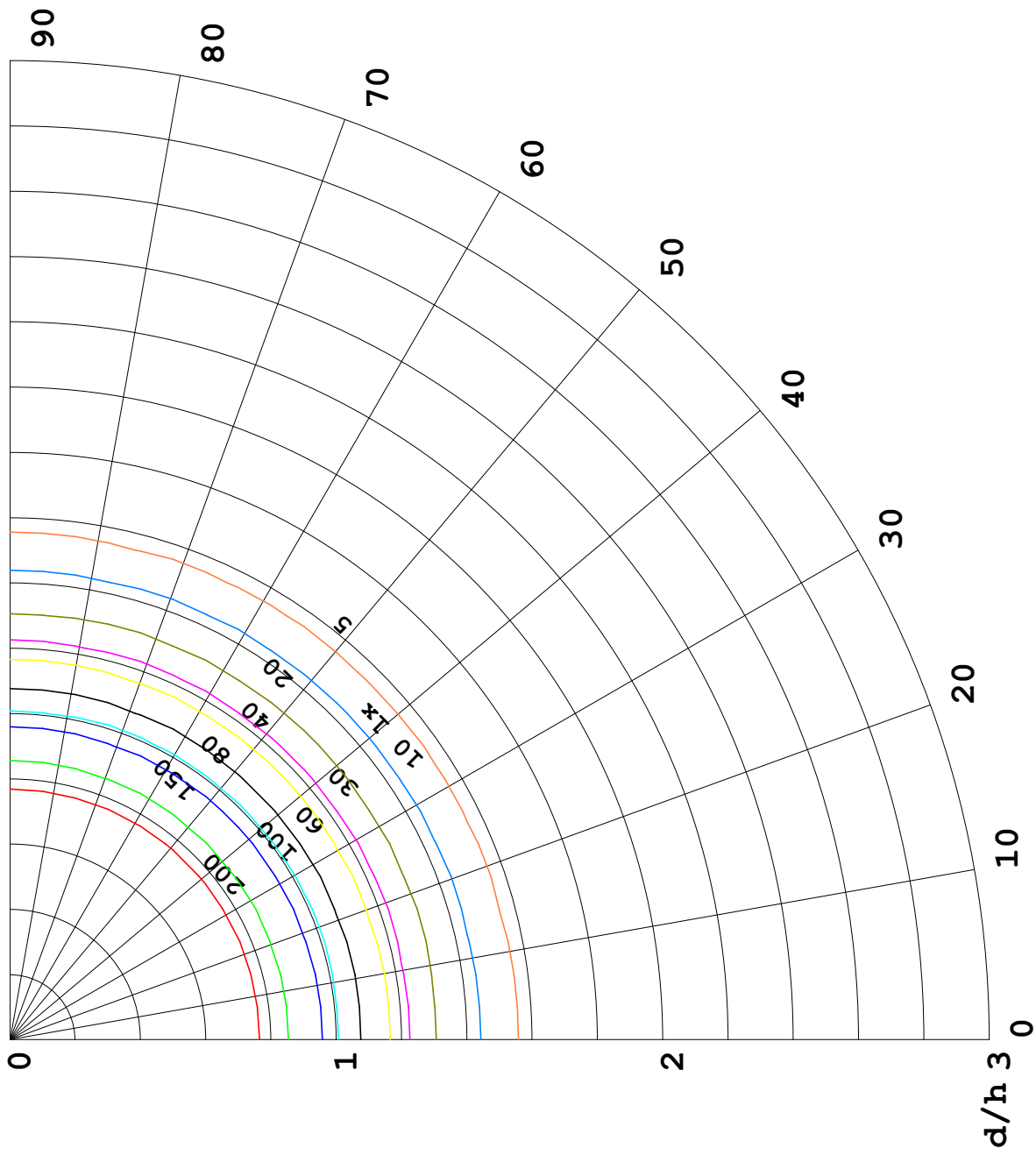
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

I (cd)



$\kappa = 1$

1000 lm



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

