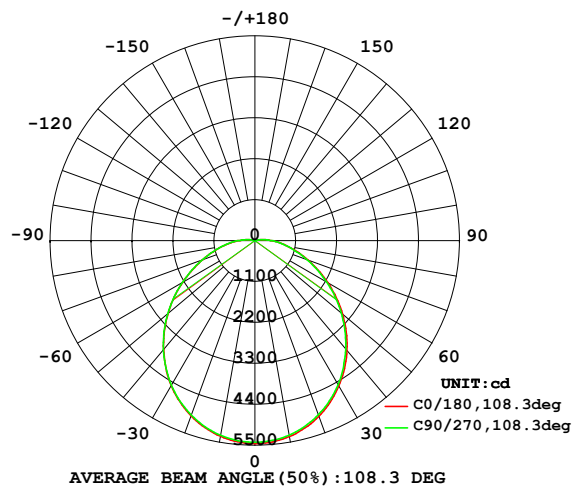


LUMINAIRE PHOTOMETRIC TEST REPORT

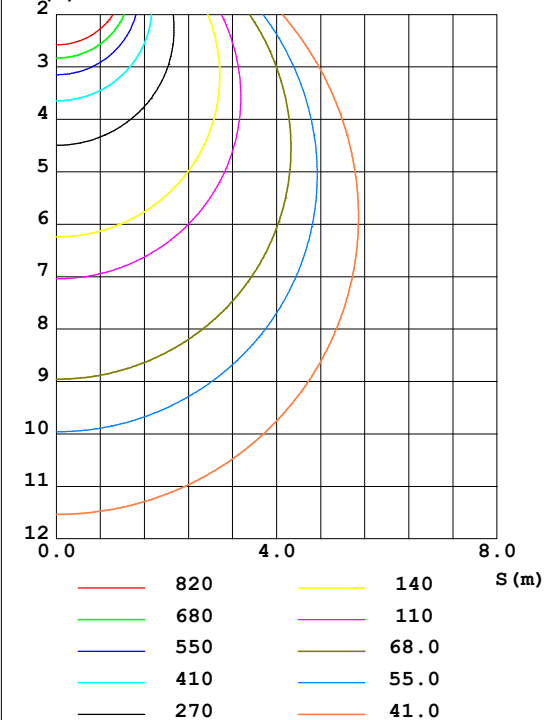
Test:U:220.8V I:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:120D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.13 lm/W			
MODEL	SMD3030	I _{max} (cd)	5454	S/MH(C0/180)	1.23
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	16060	η UP,DN(C0-180)	1.4,48.7
NOMINAL FLUX(lm)	16060	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.3,48.6
LAMPS INSIDE	1	η up(%)	2.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	97.2	CIBSE SHR MAX	1.35

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	5346	5307	5340	5313					0- 10	513.7	513.7	3.2,3.2
20	5026	4983	5015	4994					10- 20	1464	1978	12.3,12.3
30	4514	4472	4498	4486					20- 30	2197	4175	26,26
40	3850	3798	3820	3825					30- 40	2610	6785	42.2,42.2
50	3079	3033	3050	3059					40- 50	2660	9445	58.8,58.8
60	2268	2229	2241	2250					50- 60	2371	11816	73.6,73.6
70	1510	1485	1490	1497					60- 70	1843	13659	85.1,85.1
80	898.8	884.5	880.4	889.1					70- 80	1244	14903	92.8,92.8
90	461.6	456.4	433.9	453.5					80- 90	713.4	15617	97.2,97.2
100	166.5	162.8	153.7	162.9					90-100	326.2	15943	99.3,99.3
110	9.164	9.922	8.009	7.999					100-110	62.43	16005	99.7,99.7
120	11.73	11.62	9.944	10.49					110-120	10.14	16015	99.7,99.7
130	13.12	13.00	11.41	11.73					120-130	10.40	16026	99.8,99.8
140	14.81	15.02	13.30	13.13					130-140	10.15	16036	99.9,99.9
150	16.82	17.09	15.01	14.73					140-150	9.378	16045	99.9,99.9
160	18.48	18.68	16.55	16.28					150-160	7.702	16053	100,100
170	19.74	19.90	18.12	17.84					160-170	5.137	16058	100,100
180	20.27	20.27	20.40	20.16					170-180	1.851	16060	100,100
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 147.6 %									UNIT:lm		

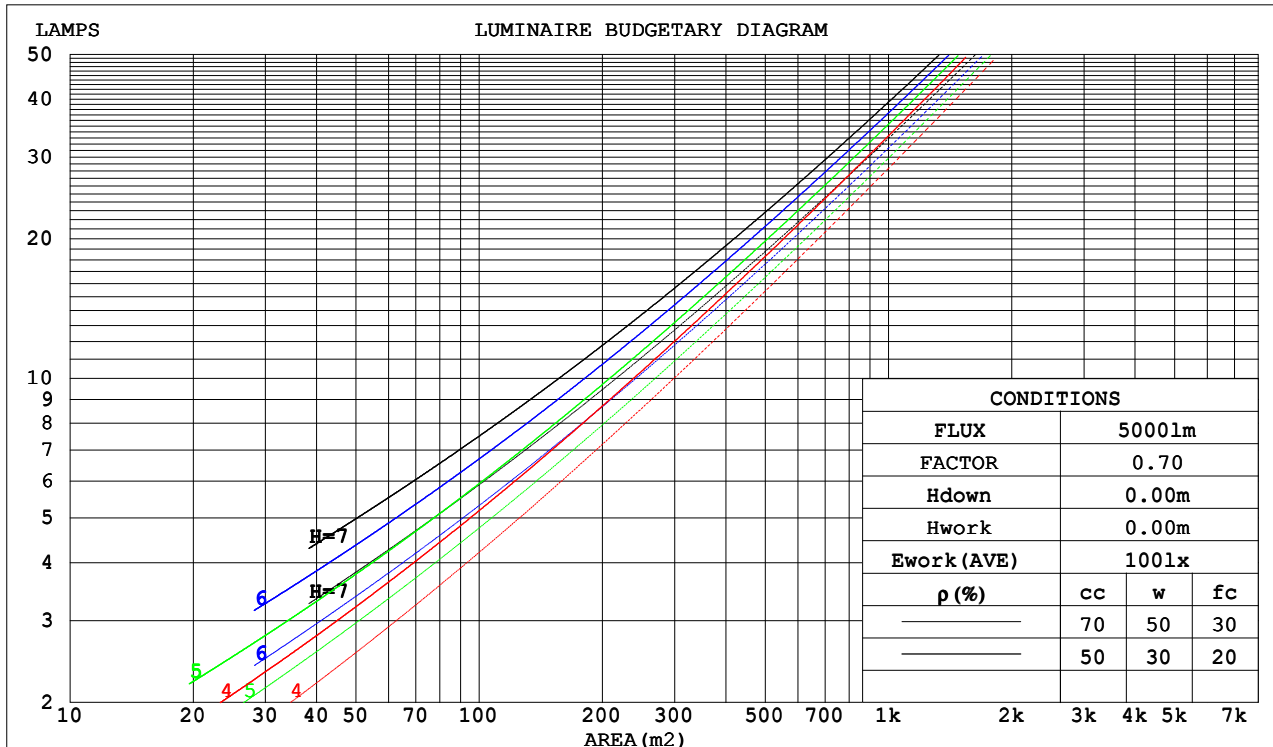
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:VISION
Test Date:2015-06-19

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:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:120D	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	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.00	.00	.00	.97
1.0	1.02	.97	.93	.99	.95	.91	.94	.91	.88	.90	.87	.84	.86	.84	.81	.79
2.0	.88	.81	.75	.86	.80	.74	.82	.77	.72	.78	.74	.70	.75	.71	.68	.65
3.0	.77	.69	.62	.76	.68	.61	.72	.66	.60	.69	.63	.59	.66	.61	.57	.55
4.0	.69	.60	.53	.67	.59	.52	.64	.57	.51	.61	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.45	.60	.51	.45	.58	.50	.44	.55	.49	.43	.53	.47	.43	.40
6.0	.55	.46	.40	.54	.46	.39	.52	.44	.39	.50	.43	.38	.48	.42	.38	.35
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.46	.39	.34	.44	.38	.33	.31
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.31	.42	.35	.30	.40	.34	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



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:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm														
NAME: BT-TH150W					TYPE:5000K					WEIGHT:				
SPEC.:120D					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	.338	.192	.061	.330	.188	.060	.315	.181	.058	.301	.174	.056	.288	.167	.054				
2.0	.306	.167	.051	.299	.164	.051	.285	.159	.049	.273	.153	.048	.262	.148	.047				
3.0	.278	.148	.044	.272	.145	.044	.260	.141	.043	.249	.136	.042	.239	.132	.041				
4.0	.254	.132	.039	.248	.130	.038	.238	.126	.038	.228	.123	.037	.219	.119	.036				
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.210	.111	.033	.202	.108	.032				
6.0	.216	.108	.031	.211	.107	.031	.203	.104	.030	.195	.101	.030	.188	.099	.029				
7.0	.200	.099	.028	.196	.098	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027				
8.0	.186	.091	.026	.183	.090	.025	.176	.088	.025	.170	.086	.025	.164	.084	.024				
9.0	.175	.084	.024	.171	.083	.023	.165	.082	.023	.159	.080	.023	.154	.078	.023				
10.0	.164	.079	.022	.161	.078	.022	.155	.076	.021	.150	.075	.021	.145	.073	.021				

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	.212	.212	.212	.181	.181	.181	.123	.123	.123	.071	.071	.071	.023	.023	.023	
1.0	.203	.177	.153	.174	.152	.132	.119	.105	.091	.069	.061	.053	.022	.019	.017	
2.0	.195	.153	.118	.167	.132	.102	.115	.091	.071	.066	.053	.042	.021	.017	.014	
3.0	.187	.136	.095	.161	.117	.082	.110	.081	.058	.064	.048	.034	.020	.015	.011	
4.0	.180	.123	.079	.154	.106	.069	.106	.074	.048	.061	.043	.029	.020	.014	.009	
5.0	.172	.112	.068	.148	.097	.059	.102	.068	.042	.059	.040	.025	.019	.013	.008	
6.0	.165	.104	.061	.141	.090	.053	.098	.063	.037	.057	.037	.022	.018	.012	.007	
7.0	.158	.097	.055	.136	.084	.048	.094	.059	.034	.054	.035	.020	.018	.011	.007	
8.0	.151	.091	.050	.130	.079	.044	.090	.056	.031	.052	.033	.019	.017	.011	.006	
9.0	.145	.086	.047	.125	.075	.041	.087	.053	.029	.050	.031	.017	.016	.010	.006	
10.0	.139	.082	.044	.120	.071	.039	.083	.050	.027	.049	.030	.016	.016	.010	.005	

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:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm										
NAME: BT-TH150W					TYPE:5000K			WEIGHT:		
SPEC.:120D					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	30.8	32.3	31.1	32.5	32.8	30.7	32.2	31.0	32.5	32.7
3H	32.4	33.8	32.8	34.1	34.4	32.3	33.7	32.7	34.0	34.3
4H	33.2	34.5	33.6	34.8	35.1	33.1	34.4	33.5	34.7	35.1
6H	34.0	35.2	34.3	35.5	35.9	33.9	35.1	34.3	35.5	35.8
8H	34.4	35.6	34.7	35.9	36.3	34.3	35.5	34.7	35.8	36.2
12H	34.8	35.9	35.2	36.3	36.7	34.7	35.9	35.1	36.2	36.6
4H 2H	31.4	32.7	31.7	33.0	33.3	31.3	32.7	31.7	33.0	33.3
3H	33.2	34.4	33.6	34.7	35.1	33.2	34.3	33.6	34.7	35.1
4H	34.2	35.2	34.6	35.6	36.0	34.1	35.2	34.5	35.6	35.9
6H	35.1	36.1	35.6	36.5	36.9	35.1	36.0	35.5	36.4	36.8
8H	35.6	36.5	36.1	36.9	37.4	35.5	36.4	36.0	36.9	37.3
12H	36.2	37.0	36.6	37.4	37.9	36.1	36.9	36.5	37.3	37.8
8H 4H	34.5	35.4	35.0	35.9	36.3	34.5	35.4	34.9	35.8	36.2
6H	35.7	36.5	36.2	36.9	37.4	35.7	36.4	36.2	36.9	37.4
8H	36.4	37.0	36.9	37.5	38.0	36.3	37.0	36.8	37.5	38.0
12H	37.1	37.7	37.6	38.2	38.7	37.0	37.6	37.6	38.1	38.7
12H 4H	34.6	35.4	35.1	35.9	36.3	34.5	35.4	35.0	35.8	36.3
6H	35.9	36.5	36.4	37.0	37.5	35.8	36.5	36.3	37.0	37.5
8H	36.6	37.2	37.1	37.7	38.2	36.5	37.1	37.1	37.6	38.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 16060 lm Total Lamp Luminous Flux. (8log(F/F0) = 9.6)

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:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:120D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

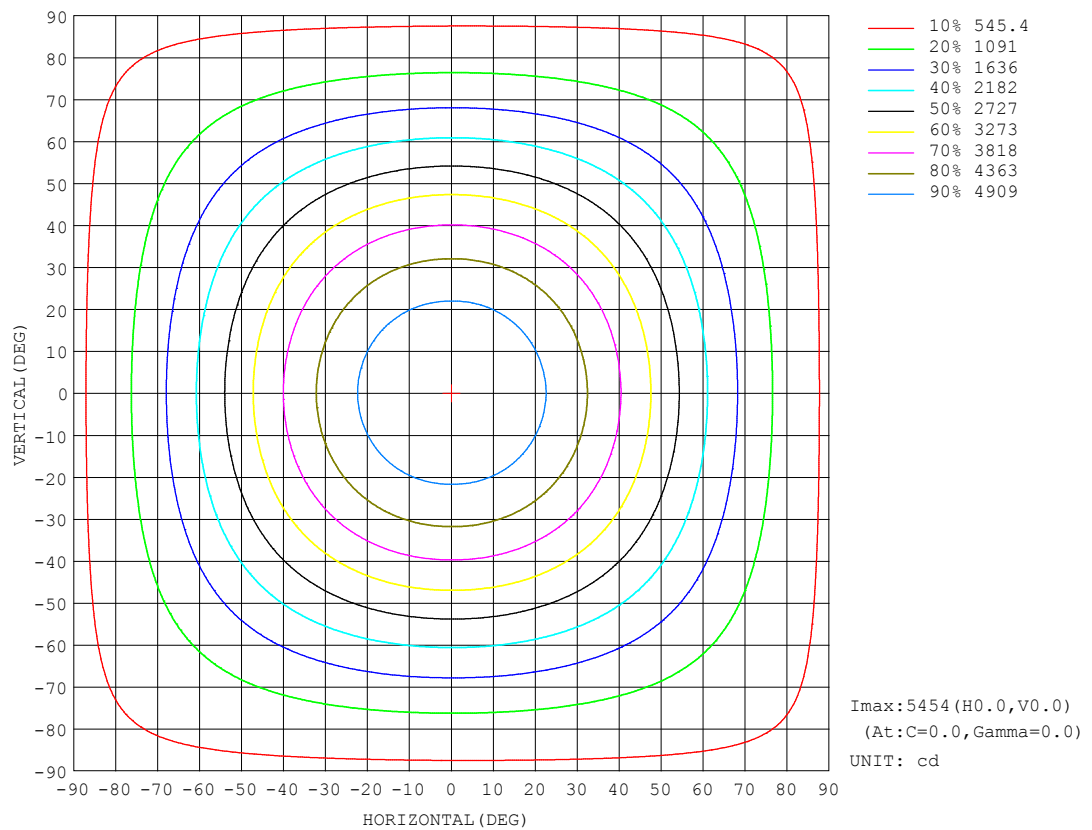
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	44	37	31
0.80	66	54	46	65	53	46	63	53	46	39
1.00	74	62	55	73	62	55	70	63	54	47
1.25	81	70	62	79	69	62	76	68	61	53
1.50	86	75	68	84	74	67	81	72	66	58
2.00	93	83	76	91	82	76	87	80	74	66
2.50	97	88	81	94	87	80	90	84	78	70
3.00	100	92	86	98	91	85	93	87	83	73
4.00	104	98	92	101	96	91	97	92	88	78
5.00	107	101	96	104	99	95	99	95	91	81
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:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:120D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

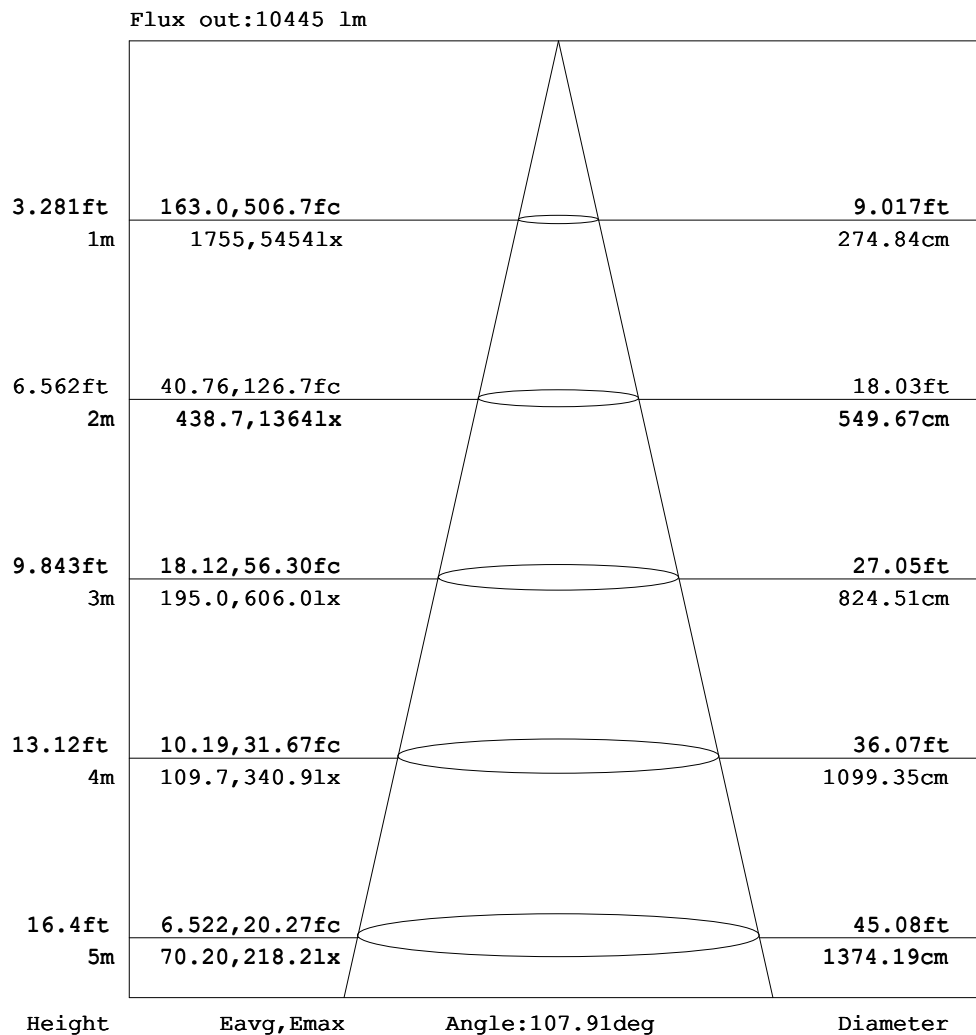


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators: VISION
 Test Date: 2015-06-19

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:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:120D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:



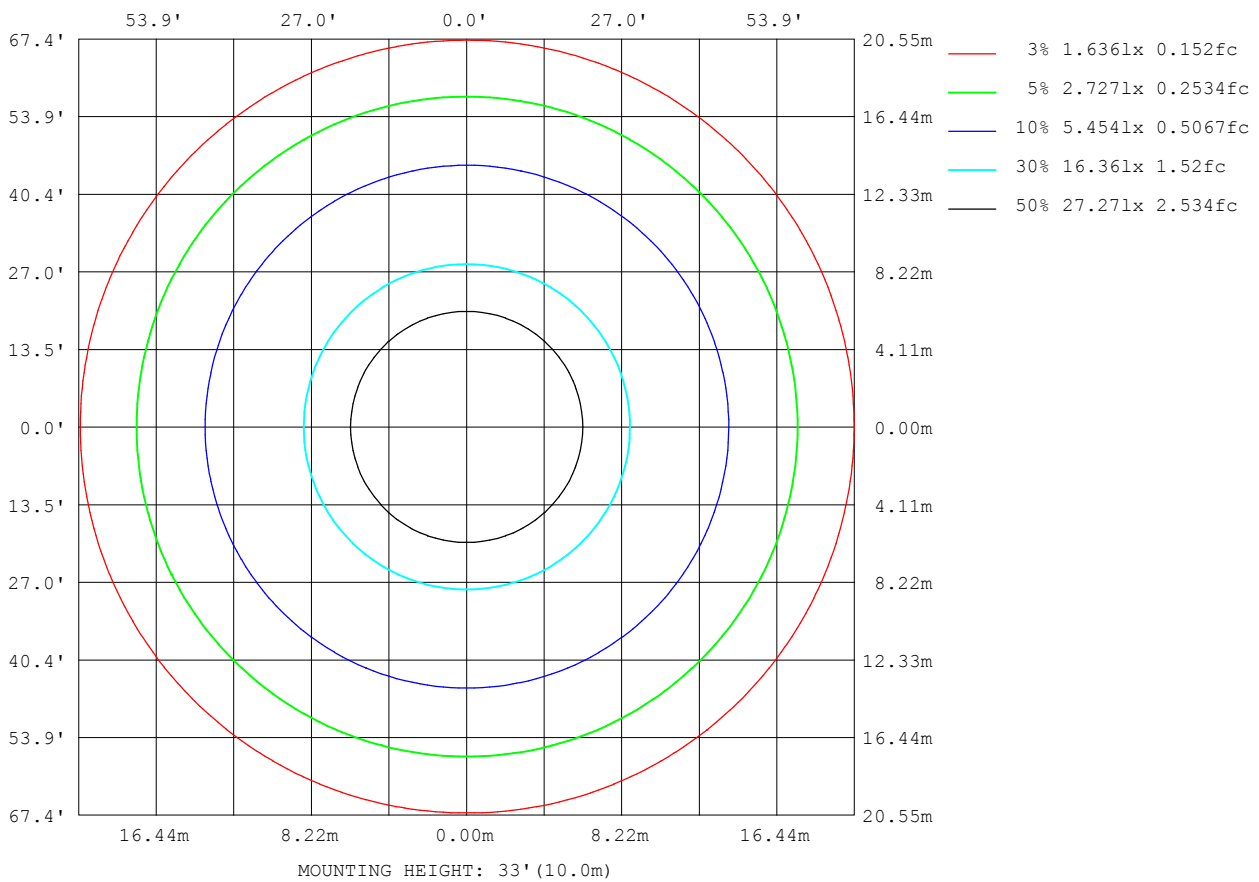
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

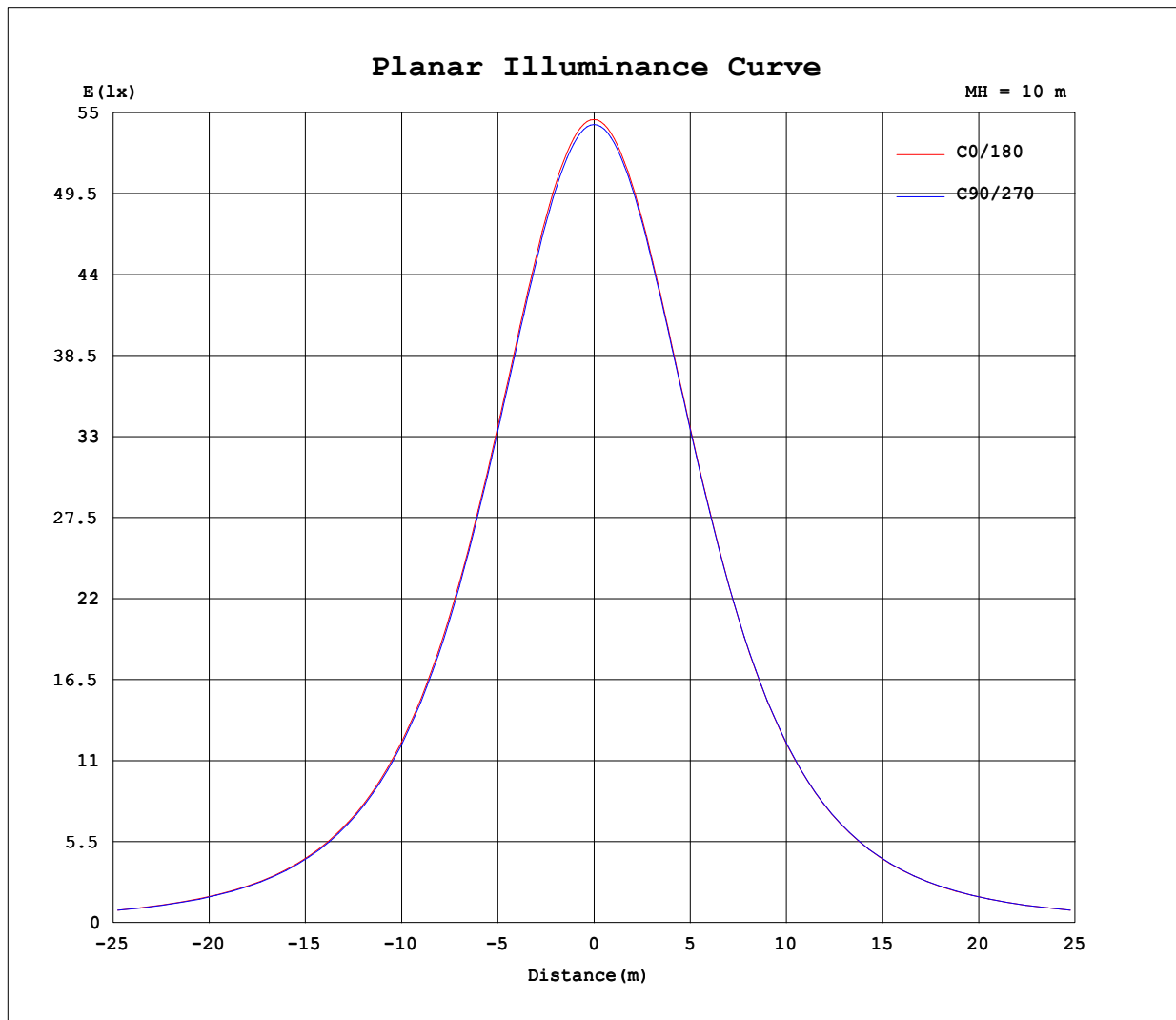
Test:U:220.8V I:0.7453A P:160.4W PF:0.9748 Lamp Flux:16060x1 lm		
NAME: BT-TH150W	TYPE:5000K	WEIGHT:
SPEC.:120D	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:



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:

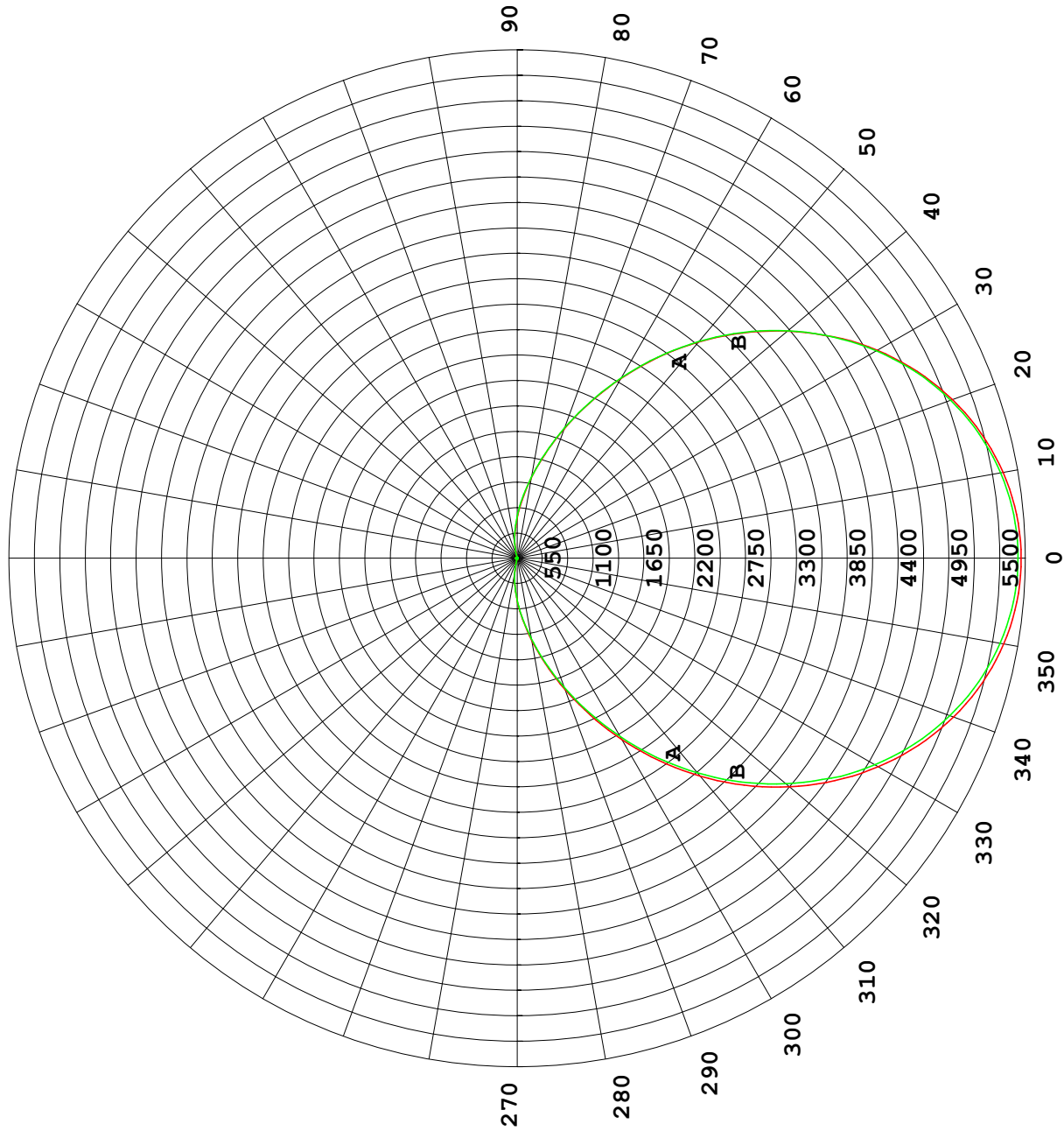
Planar Illuminance Curve

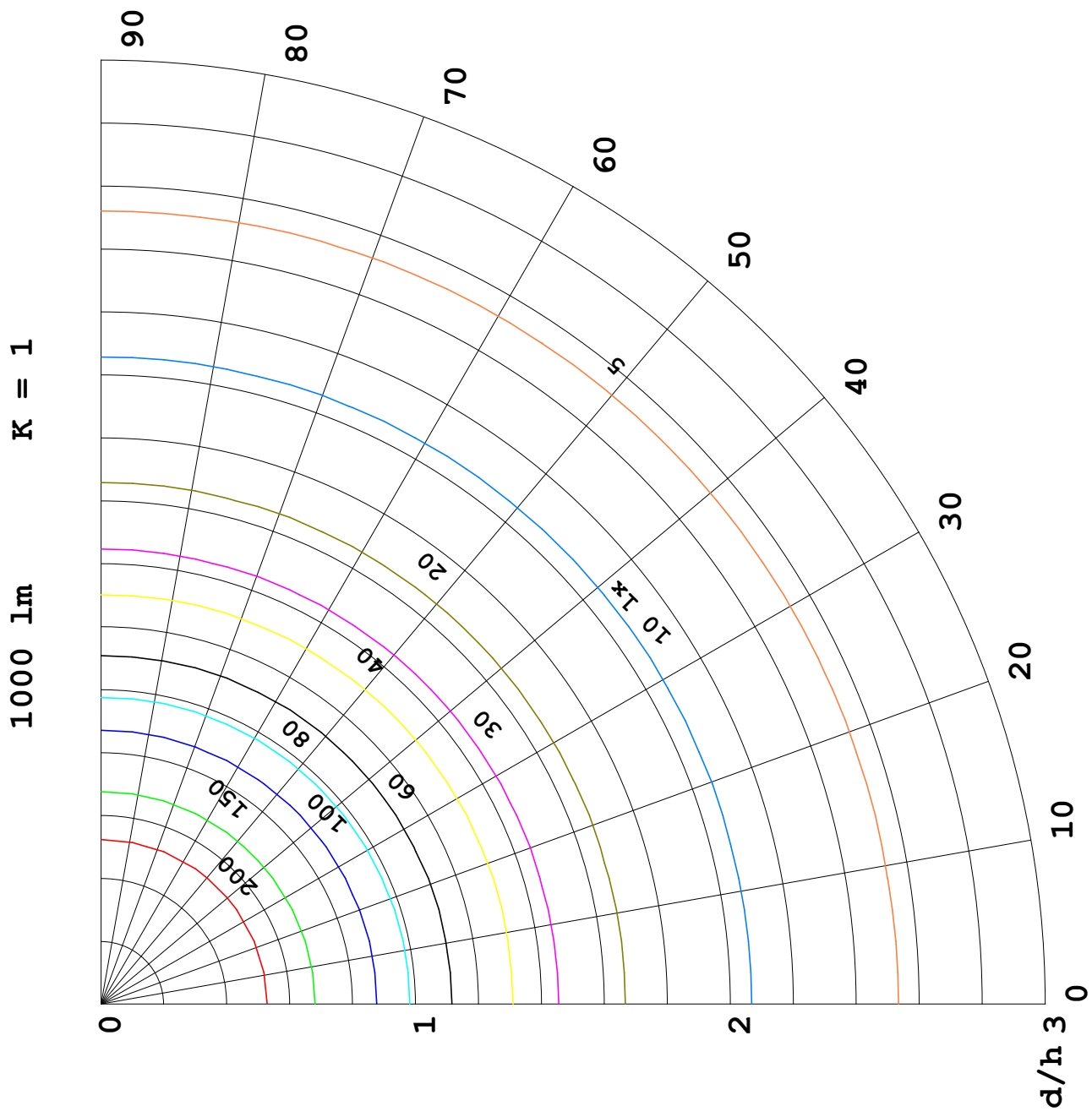


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators: VISION
Test Date: 2015-06-19

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)





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

