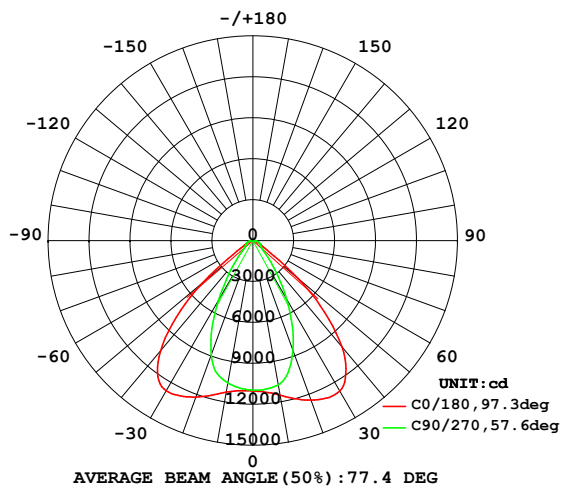


LUMINAIRE PHOTOMETRIC TEST REPORT

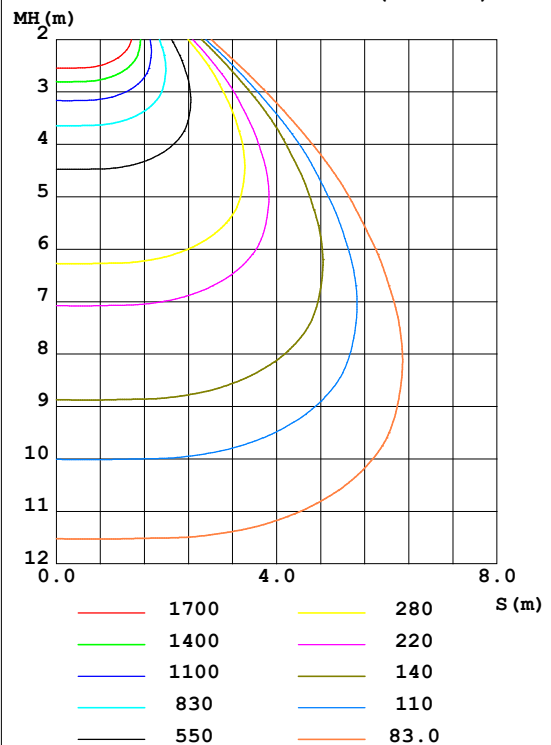
Test:U:220.8V I:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm		
NAME: BT-LON-200W	TYPE:LENS	WEIGHT:5kg
SPEC.:5000K R80 84LEDs 60X100D	DIM.: D260*H206mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 99.42 lm/W
MODEL	SMD3535	Imax(cd)	12794	S/MH(C0/180)	1.42	
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	0.87	
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	19160	η UP,DN(C0-180)	0.3,49.3	
NOMINAL FLUX(lm)	19160.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,50.1	
LAMPS INSIDE	1	η up(%)	0.5	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	220.0	η down(%)	99.5	CIBSE SHR MAX	0.95	

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:2015-04-25

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	1150	1073	1127	1059					0- 10	1051	1051	5.48, 5.48
20	1244	859.4	1220	892.4					10- 20	3082	4133	21.6, 21.6
30	1273	495.7	1271	503.4					20- 30	4502	8634	45.1, 45.1
40	1015	204.6	1053	200.4					30- 40	4745	13379	69.8, 69.8
50	429.8	84.55	485.3	81.89					40- 50	3410	16789	87.6, 87.6
60	78.35	64.63	79.72	61.54					50- 60	1221	18010	94, 94
70	37.11	49.60	38.07	46.02					60- 70	539.3	18550	96.8, 96.8
80	20.51	25.31	21.48	23.35					70- 80	348.3	18898	98.6, 98.6
90	5.675	6.879	6.412	5.740					80- 90	161.1	19059	99.5, 99.5
100	0.1862	0.1534	0.1135	0.1667					90-100	25.78	19085	99.6, 99.6
110	0.6625	0.3698	0.4449	0.3419					100-110	2.566	19087	99.6, 99.6
120	1.359	0.5356	0.9359	0.4471					110-120	6.499	19094	99.7, 99.7
130	2.318	0.8433	1.683	0.6081					120-130	9.536	19103	99.7, 99.7
140	3.147	1.586	2.480	1.100					130-140	13.21	19117	99.8, 99.8
150	3.662	2.557	3.018	1.853					140-150	15.16	19132	99.9, 99.9
160	3.983	3.391	3.538	2.627					150-160	14.20	19146	99.9, 99.9
170	4.137	4.001	3.856	3.381					160-170	10.19	19156	100, 100
180	4.267	4.222	4.283	4.209					170-180	3.814	19160	100, 100
DEG	LUMINOUS INTENSITY: $\times 10\text{cd}$ MAX $(I_i - I_{\text{avg}}) / I_{\text{avg}}$ (0-135) = 272.3 %									UNIT: lm		

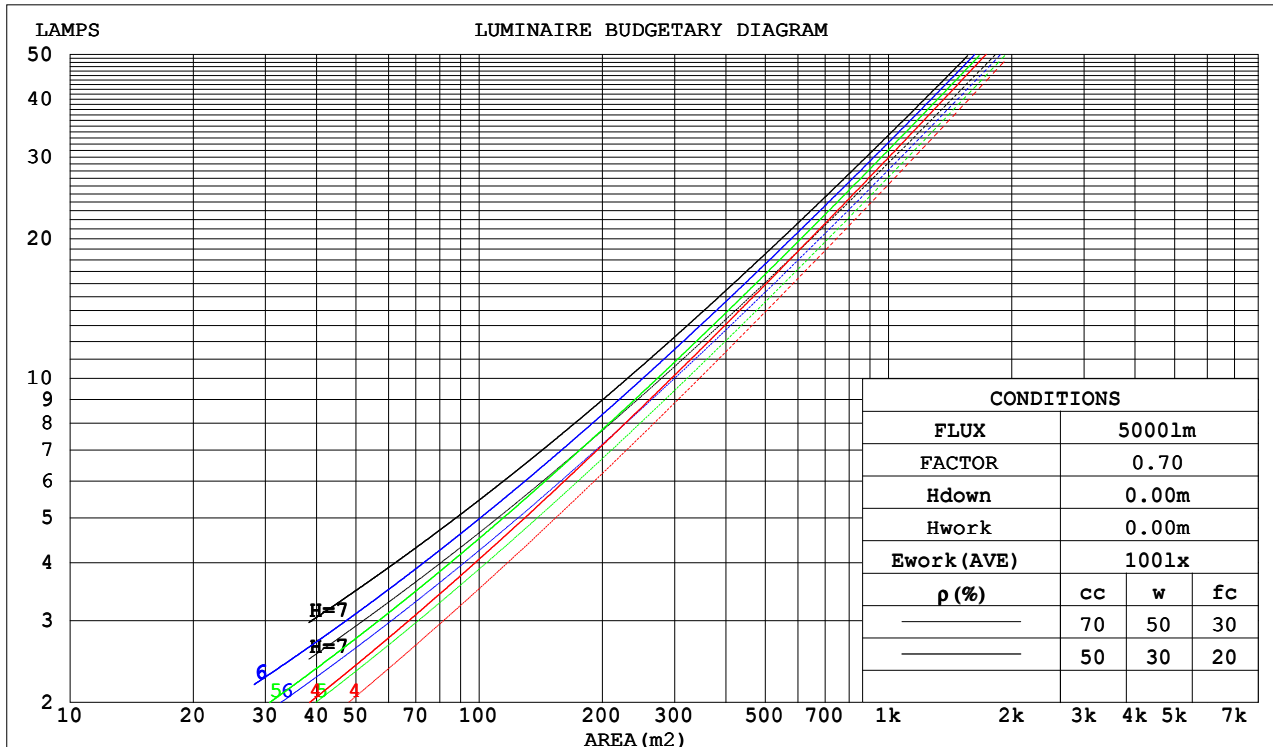
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-04-25

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:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm		
NAME: BT-LON-200W	TYPE:LENS	WEIGHT:5kg
SPEC.:5000K R80 84LEDs 60X100D	DIM.: D260*H206mm	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	.99
1.0	1.08	1.05	1.02	1.06	1.03	1.00	1.01	.99	.97	.98	.96	.94	.94	.92	.91	.89
2.0	.98	.93	.88	.96	.91	.87	.93	.89	.85	.89	.86	.83	.86	.84	.81	.80
3.0	.89	.83	.78	.87	.82	.77	.85	.80	.75	.82	.78	.74	.79	.76	.73	.71
4.0	.81	.74	.69	.80	.73	.68	.77	.72	.67	.75	.70	.66	.73	.69	.66	.64
5.0	.74	.67	.61	.73	.66	.61	.71	.65	.60	.69	.64	.60	.67	.63	.59	.57
6.0	.68	.61	.55	.67	.60	.55	.65	.59	.55	.64	.58	.54	.62	.58	.54	.52
7.0	.63	.55	.50	.62	.55	.50	.60	.54	.50	.59	.54	.49	.58	.53	.49	.47
8.0	.58	.51	.46	.57	.50	.46	.56	.50	.45	.55	.49	.45	.54	.49	.45	.43
9.0	.54	.47	.42	.53	.46	.42	.52	.46	.42	.51	.45	.41	.50	.45	.41	.40
10.0	.50	.43	.39	.50	.43	.38	.49	.42	.38	.48	.42	.38	.47	.42	.38	.36



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-04-25

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:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm														
NAME: BT-LON-200W					TYPE:LENS					WEIGHT:5kg				
SPEC.:5000K R80 84LEDs 60X100D					DIM.: D260*H206mm					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	.230	.131	.041	.223	.127	.040	.210	.120	.038	.198	.114	.037	.186	.108	.035		
2.0	.220	.120	.037	.214	.118	.036	.202	.112	.035	.192	.108	.034	.182	.103	.032		
3.0	.208	.111	.033	.203	.109	.033	.193	.105	.032	.184	.101	.031	.175	.097	.030		
4.0	.197	.102	.030	.192	.100	.030	.183	.097	.029	.175	.094	.028	.168	.091	.028		
5.0	.186	.095	.027	.182	.093	.027	.174	.091	.027	.167	.088	.026	.160	.086	.026		
6.0	.176	.088	.025	.172	.087	.025	.165	.085	.025	.159	.083	.024	.153	.081	.024		
7.0	.167	.082	.023	.163	.081	.023	.157	.080	.023	.152	.078	.023	.146	.076	.022		
8.0	.158	.077	.022	.155	.076	.022	.150	.075	.021	.145	.073	.021	.140	.072	.021		
9.0	.150	.073	.020	.148	.072	.020	.143	.071	.020	.138	.069	.020	.134	.068	.020		
10.0	.143	.069	.019	.141	.068	.019	.136	.067	.019	.132	.065	.019	.128	.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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021		
1.0	.179	.161	.145	.153	.138	.125	.105	.095	.086	.060	.055	.050	.019	.018	.016		
2.0	.167	.136	.111	.143	.117	.096	.098	.081	.067	.056	.047	.039	.018	.015	.013		
3.0	.157	.118	.087	.134	.102	.076	.092	.071	.053	.053	.041	.031	.017	.013	.010		
4.0	.148	.104	.070	.127	.090	.061	.087	.063	.043	.051	.037	.025	.016	.012	.008		
5.0	.140	.093	.058	.121	.080	.050	.083	.056	.036	.048	.033	.021	.016	.011	.007		
6.0	.134	.084	.049	.115	.073	.042	.079	.051	.030	.046	.030	.018	.015	.010	.006		
7.0	.127	.077	.042	.110	.067	.036	.076	.047	.026	.044	.028	.015	.014	.009	.005		
8.0	.122	.071	.036	.105	.062	.032	.072	.043	.023	.042	.026	.013	.014	.008	.004		
9.0	.116	.066	.032	.100	.057	.028	.070	.040	.020	.040	.024	.012	.013	.008	.004		
10.0	.112	.062	.029	.096	.054	.025	.067	.038	.018	.039	.022	.011	.013	.007	.004		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-04-25

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:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm										
NAME: BT-LON-200W					TYPE:LENS			WEIGHT:5kg		
SPEC.:5000K R80 84LEDs 60X100D					DIM.: D260*H206mm			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	30.8	32.0	31.0	32.2	32.4	26.6	27.8	26.8	28.0	28.2
3H	30.7	31.8	31.0	32.1	32.3	27.1	28.2	27.4	28.5	28.7
4H	30.7	31.8	31.0	32.0	32.3	27.5	28.5	27.8	28.8	29.0
6H	30.8	31.7	31.1	32.0	32.3	27.8	28.8	28.1	29.1	29.3
8H	30.8	31.7	31.1	32.0	32.3	28.0	28.9	28.3	29.2	29.5
12H	30.8	31.7	31.1	32.0	32.3	28.2	29.1	28.5	29.4	29.7
4H 2H	30.6	31.6	30.9	31.9	32.1	26.7	27.7	27.0	28.0	28.2
3H	30.6	31.5	31.0	31.8	32.1	27.4	28.3	27.8	28.6	28.9
4H	30.7	31.5	31.1	31.8	32.2	27.9	28.8	28.3	29.1	29.4
6H	30.8	31.5	31.2	31.9	32.2	28.4	29.2	28.8	29.5	29.9
8H	30.9	31.5	31.3	31.9	32.3	28.7	29.3	29.1	29.7	30.1
12H	30.9	31.5	31.3	31.9	32.3	29.0	29.6	29.4	30.0	30.4
8H 4H	30.7	31.4	31.1	31.7	32.1	28.1	28.7	28.5	29.1	29.5
6H	30.9	31.4	31.3	31.8	32.3	28.7	29.3	29.2	29.7	30.1
8H	31.0	31.5	31.4	31.9	32.4	29.1	29.5	29.5	30.0	30.4
12H	31.1	31.5	31.6	32.0	32.5	29.6	30.0	30.0	30.4	30.9
12H 4H	30.7	31.3	31.1	31.7	32.1	28.1	28.7	28.5	29.1	29.5
6H	30.9	31.4	31.3	31.8	32.2	28.8	29.2	29.2	29.7	30.1
8H	31.0	31.4	31.5	31.9	32.4	29.2	29.6	29.6	30.0	30.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.1 / - 3.0					+ 1.4 / - 1.2				
1.5H	+ 2.5 / - 4.0					+ 1.5 / - 1.6				
2.0H	+ 5.3 / - 3.4					+ 1.6 / - 0.8				

CIE Pub.117 Corrected 19160 lm Total Lamp Luminous Flux. (8log(F/F0) = 10.3)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-04-25

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:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm		
NAME: BT-LON-200W	TYPE:LENS	WEIGHT:5kg
SPEC.:5000K R80 84LEDs 60X100D	DIM.: D260*H206mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:

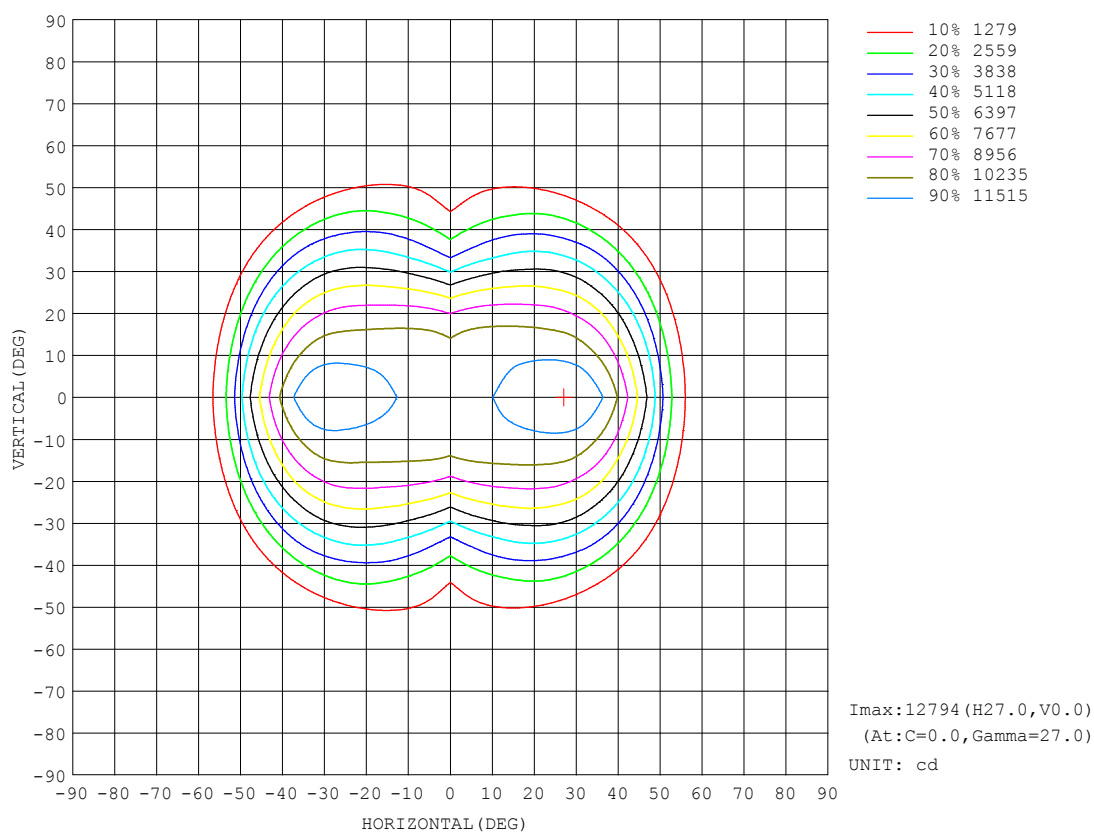
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	73	64	58	72	63	58	71	63	58	53
0.80	82	73	68	81	73	68	80	72	67	62
1.00	89	81	76	88	80	75	86	81	75	70
1.25	95	87	82	93	87	82	91	85	81	75
1.50	98	92	87	97	91	86	94	89	85	79
2.00	103	97	93	101	96	92	98	94	90	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	101	98	102	99	96	88
4.00	110	106	103	108	105	102	104	101	99	91
5.00	112	109	106	110	107	104	105	103	101	93
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:2015-04-25

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:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm		
NAME: BT-LON-200W	TYPE:LENS	WEIGHT:5kg
SPEC.:5000K R80 84LEDs 60X100D	DIM.: D260*H206mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:

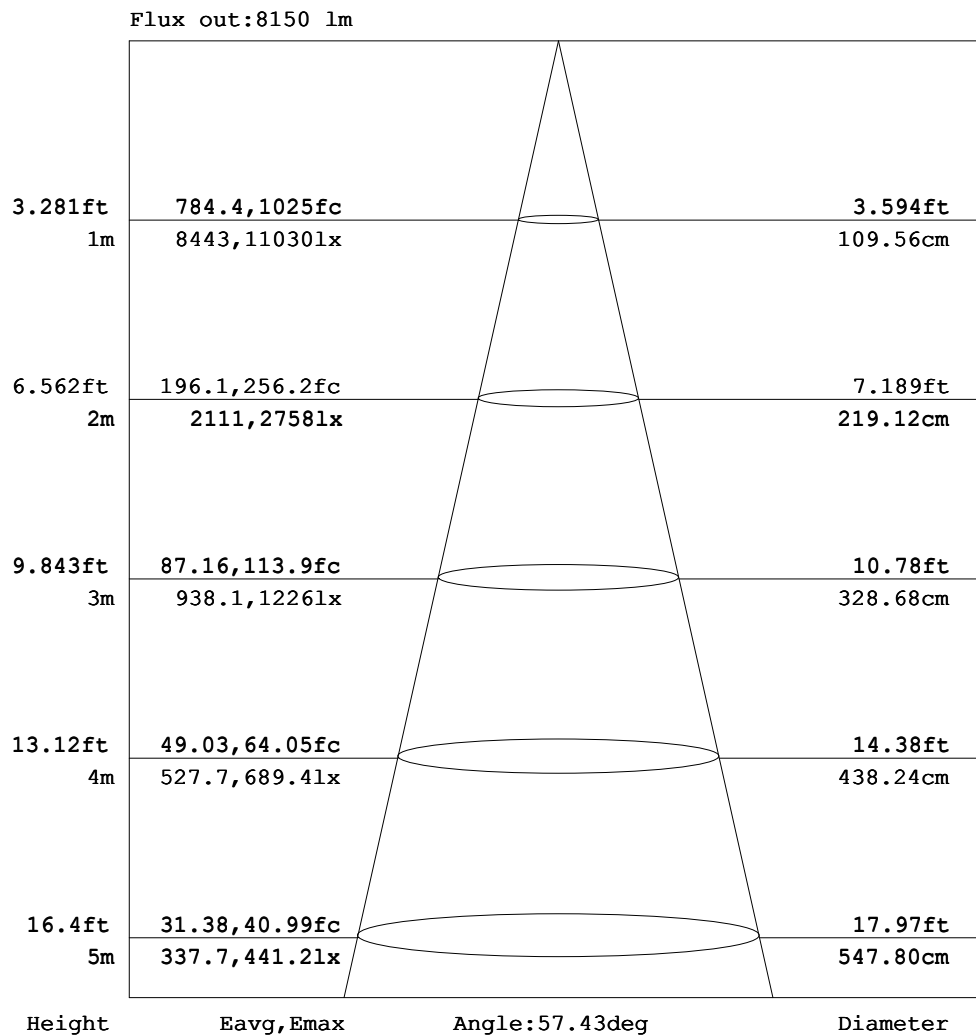


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-04-25

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:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm		
NAME: BT-LON-200W	TYPE:LENS	WEIGHT:5kg
SPEC.:5000K R80 84LEDs 60X100D	DIM.: D260*H206mm	SERIAL No.:
MFR.: EVERFINE	SUR.:163*163mm	PROTECTION ANGLE:



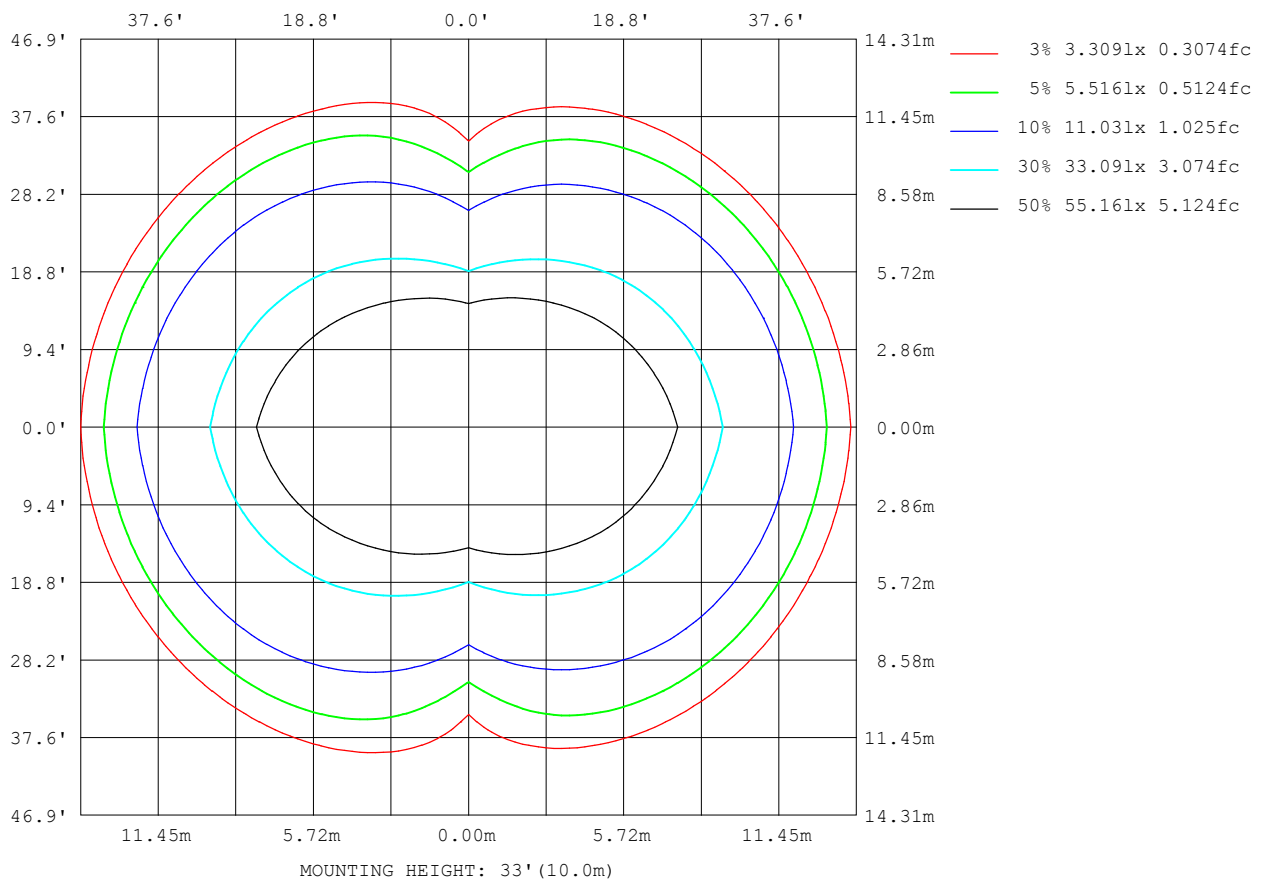
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-04-25

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

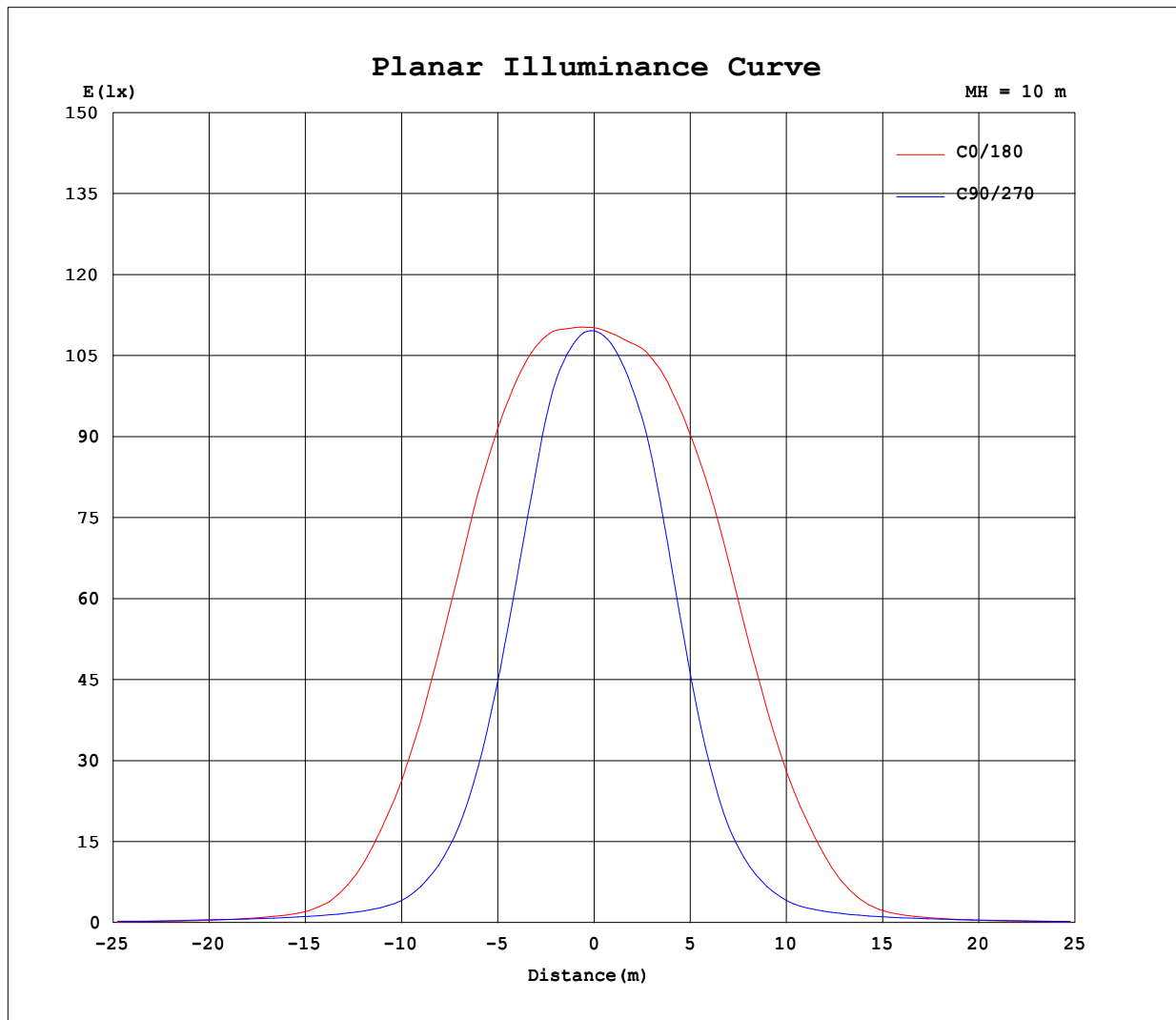
Test:U:220.8V I:0.9030A P:192.7W PF:0.9667 Lamp Flux:19160.1x1 lm		
NAME: BT-LON-200W	TYPE: LENS	WEIGHT: 5kg
SPEC.: 5000K R80 84LEDs 60X100D	DIM.: D260*H206mm	SERIAL No.:
MFR.: EVERFINE	SUR.: 163*163mm	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-04-25

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:

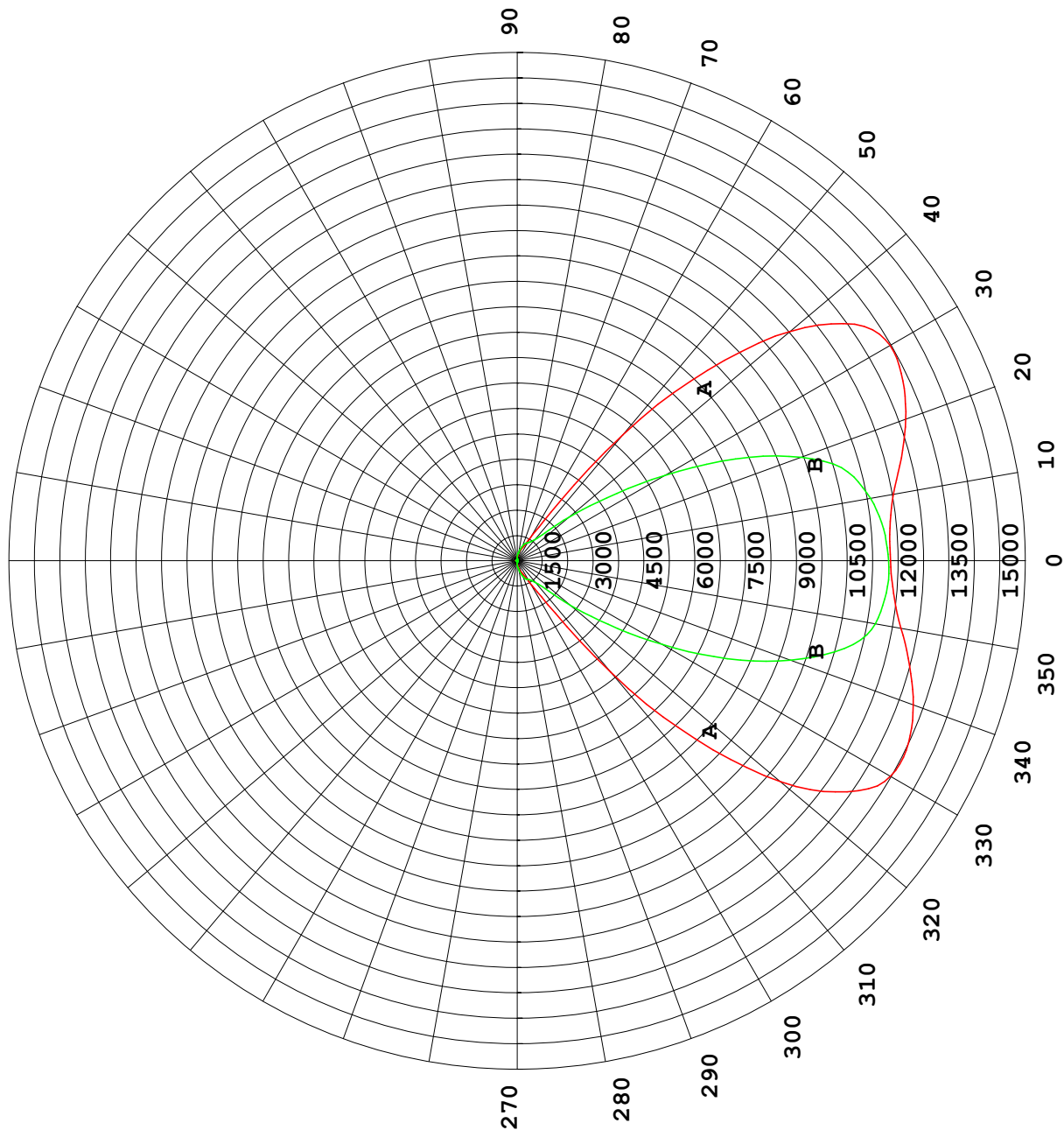
Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-04-25

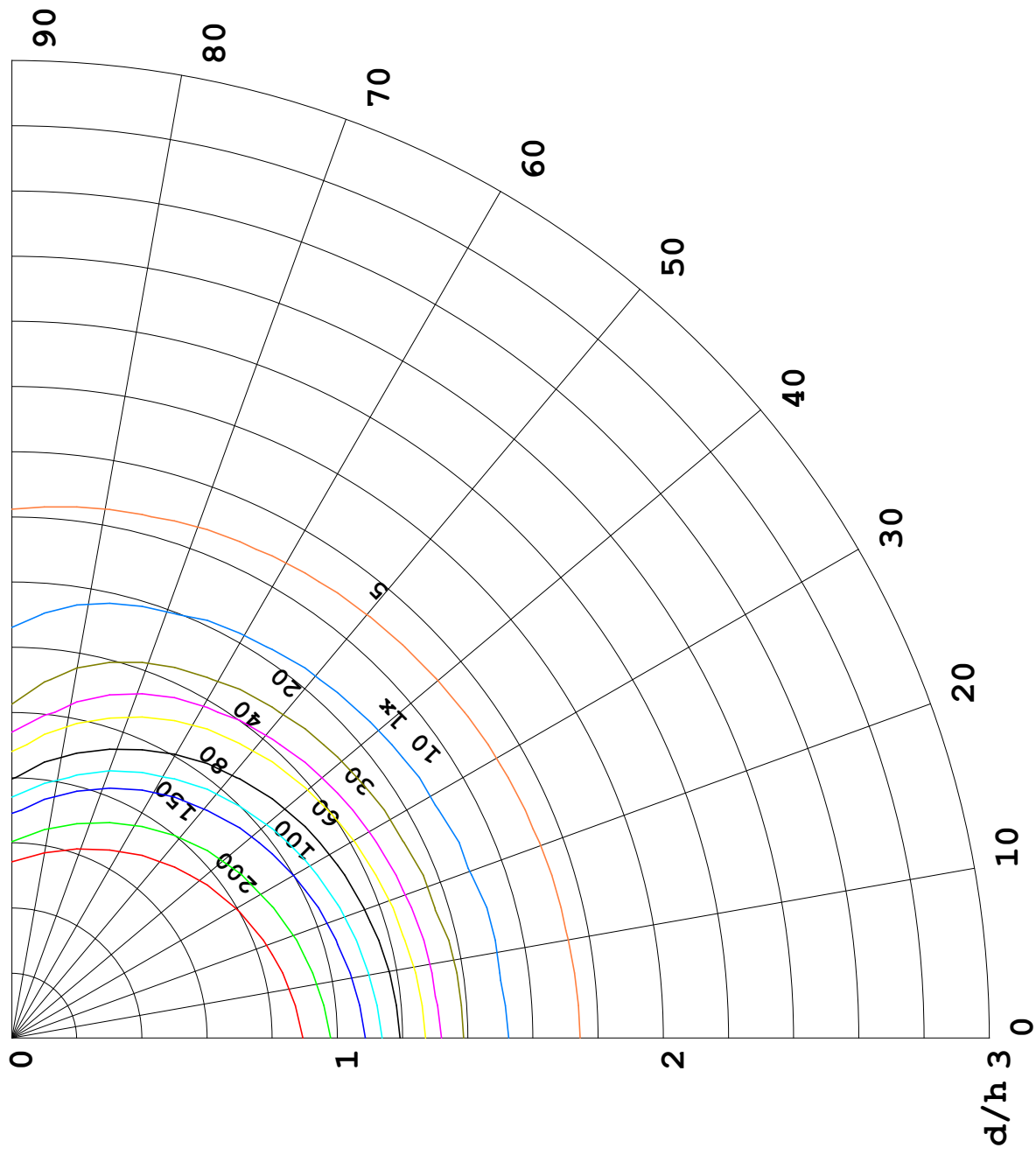
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.256m [K=1.0000]
Remarks:

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

