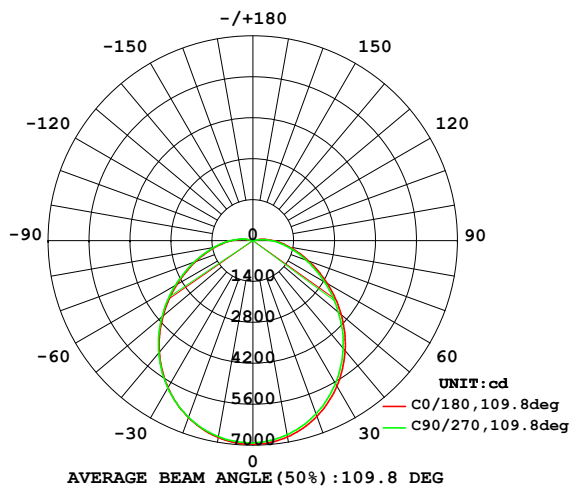


LUMINAIRE PHOTOMETRIC TEST REPORT

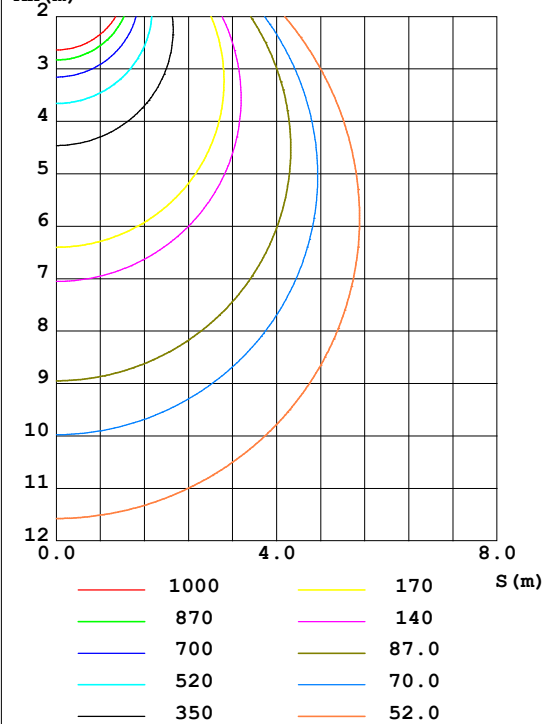
Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm		
NAME: BT-PAR82 200W	TYPE:Frosted PC	WEIGHT:
SPEC.:5700K 120D 224LEDs	DIM.: 260*300mm	SERIAL No.:
MFR.: EVERFINE	SUR.:200mm*200mm	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 105.96 lm/W			
MODEL	SMD3030	I _{max} (cd)	6967	S/MH(C0/180)	1.24
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	110	TOTAL FLUX(lm)	21193	η UP,DN(C0-180)	1.5,47.5
NOMINAL FLUX(lm)	21193	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.8,49.2
LAMPS INSIDE	1	η up(%)	3.3	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	110	η down(%)	96.7	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:
 Test Date:2015-07-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:9.390m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	6817	6741	6839	6806					0- 10	655.8	655.8	3.09, 3.09
20	6399	6309	6443	6433					10- 20	1870	2526	11.9, 11.9
30	5747	5647	5806	5820					20- 30	2811	5337	25.2, 25.2
40	4911	4803	4981	5010					30- 40	3353	8690	41, 41
50	3947	3825	4006	4068					40- 50	3438	12128	57.2, 57.2
60	2944	2832	3000	3064					50- 60	3095	15223	71.8, 71.8
70	2022	1933	2072	2131					60- 70	2463	17686	83.5, 83.5
80	1265	1200	1305	1356					70- 80	1739	19424	91.7, 91.7
90	692.8	650.0	720.3	759.4					80- 90	1067	20491	96.7, 96.7
100	254.1	224.4	289.5	318.5					90-100	527.3	21019	99.2, 99.2
110	13.33	15.86	10.57	9.914					100-110	104.5	21123	99.7, 99.7
120	14.95	14.79	12.16	11.94					110-120	12.88	21136	99.7, 99.7
130	16.99	16.85	14.25	13.83					120-130	12.95	21149	99.8, 99.8
140	19.49	19.67	17.12	16.48					130-140	12.95	21162	99.9, 99.9
150	22.13	22.27	19.38	18.77					140-150	12.16	21174	99.9, 99.9
160	24.09	24.16	21.52	20.92					150-160	9.985	21184	100, 100
170	25.56	25.62	23.60	22.99					160-170	6.655	21191	100, 100
180	26.26	26.13	26.48	25.96					170-180	2.390	21193	100, 100
DEG	LUMINOUS INTENSITY:cd MAX (Ii - Iavg)/Iavg (0-135) = 143.3 %									UNIT:lm		

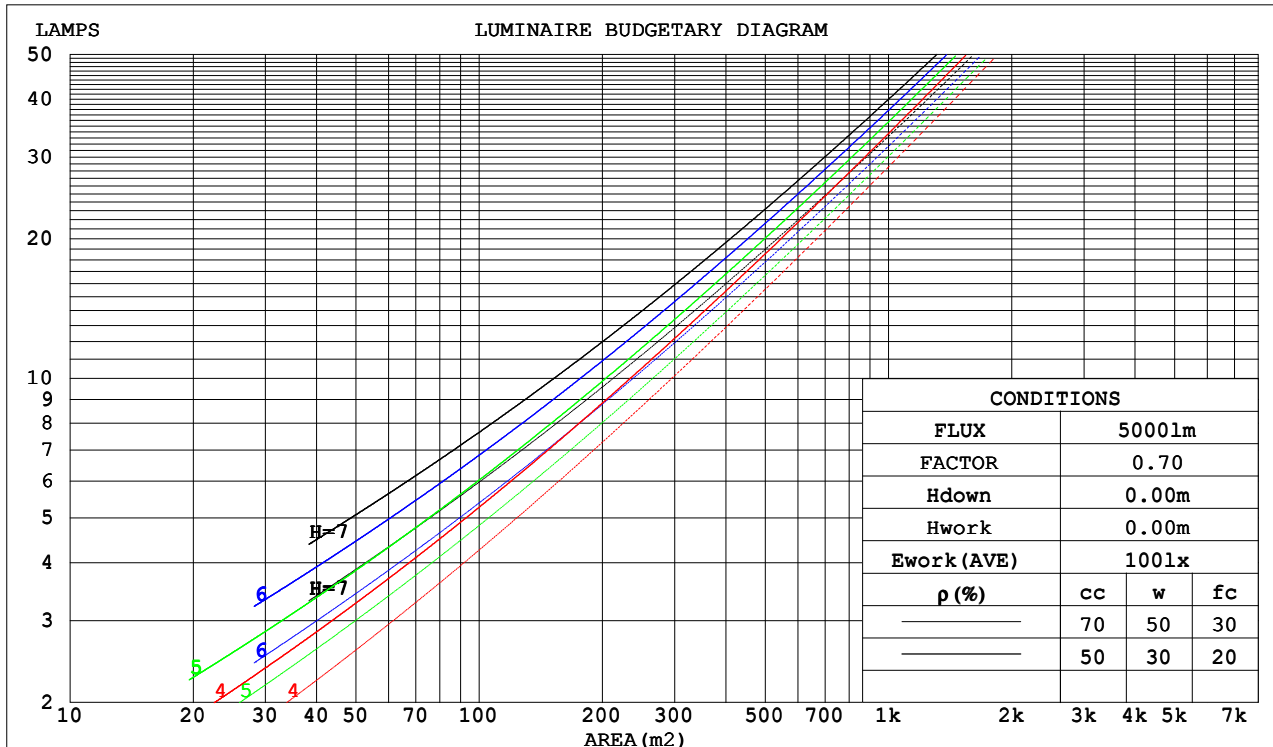
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 30DEG
 Operators:
 Test Date: 2015-07-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity: 65.0%
 Test Distance: 9.390m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm		
NAME: BT-PAR82 200W	TYPE:Frosted PC	WEIGHT:
SPEC.:5700K 120D 224LEDs	DIM.: 260*300mm	SERIAL No.:
MFR.: EVERFINE	SUR.:200mm*200mm	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						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.01	.96	.92	.99	.94	.90	.94	.90	.87	.89	.86	.83	.85	.83	.80	.78
2.0	.88	.80	.74	.85	.79	.73	.81	.76	.71	.77	.73	.69	.74	.70	.67	.64
3.0	.77	.68	.61	.75	.67	.60	.71	.65	.59	.68	.62	.58	.65	.60	.56	.54
4.0	.68	.59	.52	.66	.58	.51	.63	.56	.50	.61	.54	.49	.58	.53	.48	.46
5.0	.61	.51	.45	.59	.51	.44	.57	.49	.43	.54	.48	.43	.52	.46	.42	.39
6.0	.55	.45	.39	.53	.45	.38	.51	.44	.38	.49	.42	.37	.47	.41	.37	.34
7.0	.49	.41	.34	.48	.40	.34	.47	.39	.34	.45	.38	.33	.43	.37	.33	.30
8.0	.45	.36	.31	.44	.36	.30	.43	.35	.30	.41	.34	.30	.40	.34	.29	.27
9.0	.41	.33	.27	.41	.33	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.24
10.0	.38	.30	.25	.38	.30	.25	.36	.29	.24	.35	.29	.24	.34	.28	.24	.22



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-07-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:9.390m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm														
NAME: BT-PAR82 200W					TYPE:Frosted PC					WEIGHT:				
SPEC.:5700K 120D 224LEDs					DIM.: 260*300mm					SERIAL No.:				
MFR.: EVERFINE					SUR.:200mm*200mm					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	.347	.197	.063	.339	.193	.061	.324	.186	.059	.309	.179	.057	.296	.172	.055	
2.0	.311	.171	.052	.304	.167	.052	.290	.162	.050	.278	.156	.049	.266	.151	.047	
3.0	.282	.150	.045	.275	.148	.044	.263	.143	.043	.252	.138	.042	.242	.134	.041	
4.0	.257	.133	.039	.251	.131	.039	.240	.127	.038	.230	.124	.037	.221	.120	.037	
5.0	.236	.120	.035	.230	.118	.034	.221	.115	.034	.212	.112	.033	.203	.109	.033	
6.0	.217	.109	.031	.213	.107	.031	.204	.105	.030	.196	.102	.030	.188	.099	.029	
7.0	.201	.100	.028	.197	.098	.028	.190	.096	.028	.182	.093	.027	.175	.091	.027	
8.0	.188	.092	.026	.184	.091	.026	.177	.088	.025	.170	.086	.025	.164	.084	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.160	.080	.023	.154	.078	.023	
10.0	.165	.079	.022	.162	.078	.022	.156	.076	.022	.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	.216	.216	.216	.184	.184	.184	.126	.126	.126	.072	.072	.072	.023	.023	.023	
1.0	.208	.181	.157	.178	.156	.135	.122	.107	.093	.070	.062	.054	.022	.020	.018	
2.0	.200	.157	.121	.172	.136	.105	.118	.094	.073	.068	.055	.043	.022	.018	.014	
3.0	.193	.140	.098	.165	.121	.085	.113	.084	.060	.065	.049	.035	.021	.016	.012	
4.0	.185	.127	.083	.158	.110	.072	.109	.076	.051	.063	.045	.030	.020	.015	.010	
5.0	.177	.117	.072	.152	.101	.063	.105	.071	.044	.061	.041	.026	.020	.014	.009	
6.0	.170	.108	.065	.146	.094	.056	.101	.066	.040	.058	.039	.024	.019	.013	.008	
7.0	.162	.102	.059	.140	.088	.051	.097	.062	.036	.056	.036	.022	.018	.012	.007	
8.0	.156	.096	.055	.134	.083	.048	.093	.058	.034	.054	.034	.020	.017	.011	.007	
9.0	.150	.091	.051	.129	.079	.045	.089	.055	.032	.052	.033	.019	.017	.011	.006	
10.0	.144	.087	.049	.124	.075	.042	.086	.053	.030	.050	.031	.018	.016	.010	.006	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-07-27

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm										
NAME: BT-PAR82 200W					TYPE:Frosted PC			WEIGHT:		
SPEC.:5700K 120D 224LEDs					DIM.: 260*300mm			SERIAL No.:		
MFR.: EVERFINE					SUR.:200mm*200mm			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	31.6	33.1	31.9	33.3	33.6	31.4	32.9	31.7	33.2	33.5
3H	33.3	34.7	33.6	35.0	35.3	33.1	34.5	33.4	34.8	35.1
4H	34.1	35.5	34.5	35.8	36.1	33.9	35.3	34.3	35.6	35.9
6H	35.0	36.2	35.4	36.6	36.9	34.8	36.0	35.1	36.4	36.7
8H	35.4	36.6	35.8	37.0	37.4	35.2	36.4	35.6	36.8	37.1
12H	35.9	37.1	36.3	37.5	37.8	35.7	36.8	36.1	37.2	37.6
4H 2H	32.2	33.5	32.5	33.8	34.1	32.1	33.4	32.4	33.7	34.0
3H	34.1	35.3	34.5	35.6	36.0	34.0	35.1	34.4	35.5	35.9
4H	35.1	36.2	35.5	36.6	37.0	35.0	36.0	35.4	36.4	36.8
6H	36.2	37.1	36.6	37.5	38.0	36.0	36.9	36.4	37.3	37.8
8H	36.7	37.6	37.2	38.0	38.5	36.5	37.4	37.0	37.8	38.3
12H	37.3	38.2	37.8	38.6	39.1	37.1	37.9	37.6	38.4	38.9
8H 4H	35.5	36.4	36.0	36.8	37.3	35.4	36.3	35.8	36.7	37.2
6H	36.8	37.6	37.3	38.0	38.5	36.6	37.4	37.1	37.9	38.4
8H	37.5	38.2	38.0	38.7	39.2	37.3	38.0	37.8	38.5	39.0
12H	38.3	38.9	38.9	39.4	40.0	38.1	38.7	38.6	39.2	39.8
12H 4H	35.6	36.4	36.1	36.9	37.3	35.4	36.3	35.9	36.7	37.2
6H	37.0	37.6	37.5	38.1	38.6	36.8	37.5	37.3	38.0	38.5
8H	37.8	38.4	38.3	38.9	39.4	37.6	38.2	38.1	38.7	39.2
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 21193 lm Total Lamp Luminous Flux. (8log(F/F0) = 10.6)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:30DEG
Operators:
Test Date:2015-07-27

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm		
NAME: BT-PAR82 200W	TYPE:Frosted PC	WEIGHT:
SPEC.:5700K 120D 224LEDs	DIM.: 260*300mm	SERIAL No.:
MFR.: EVERFINE	SUR.:200mm*200mm	PROTECTION ANGLE:

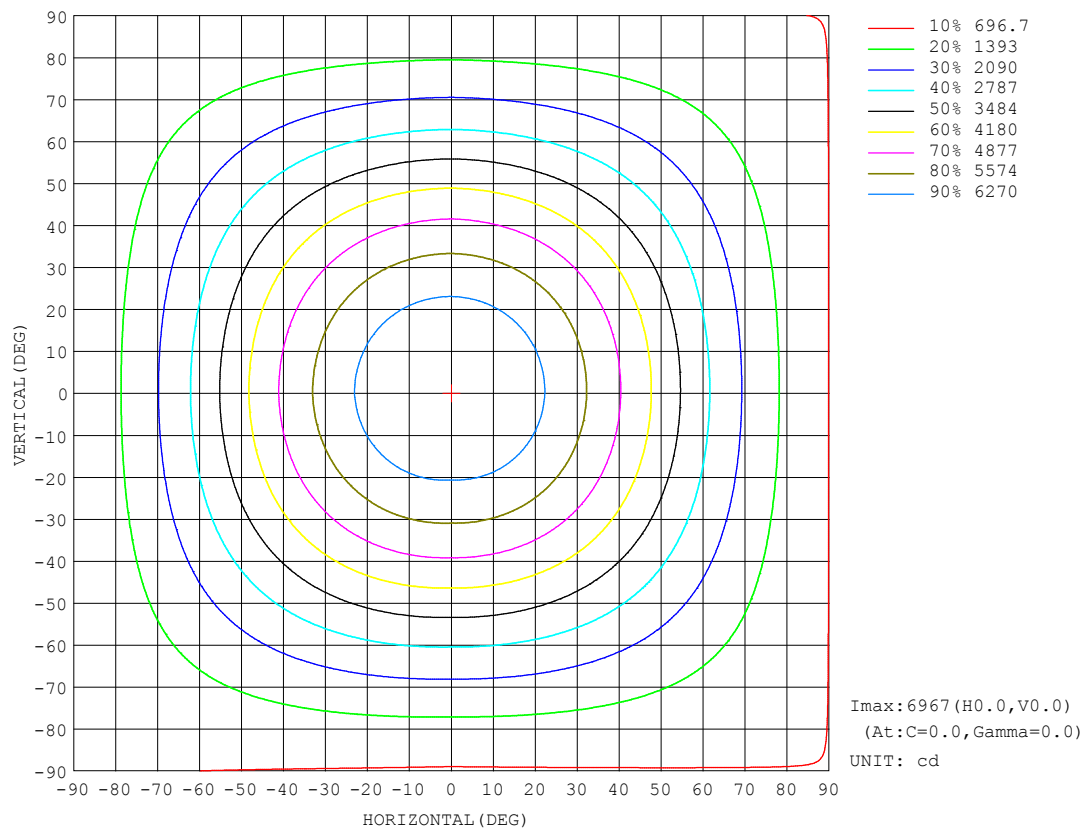
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	44	36	55	43	36	53	43	36	30
0.80	65	53	45	64	53	45	62	52	45	38
1.00	73	61	54	72	61	53	69	62	53	45
1.25	80	69	61	78	68	61	75	66	60	52
1.50	85	74	67	83	73	66	80	71	65	57
2.00	92	82	75	90	81	74	86	79	73	64
2.50	96	87	80	94	86	79	89	83	77	68
3.00	99	91	85	97	90	84	92	86	82	72
4.00	103	97	91	101	95	90	96	91	87	77
5.00	106	100	95	103	98	94	98	94	90	80
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:2015-07-27

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity:65.0%
Test Distance:9.390m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm		
NAME: BT-PAR82 200W	TYPE:Frosted PC	WEIGHT:
SPEC.:5700K 120D 224LEDs	DIM.: 260*300mm	SERIAL No.:
MFR.: EVERFINE	SUR.:200mm*200mm	PROTECTION ANGLE:

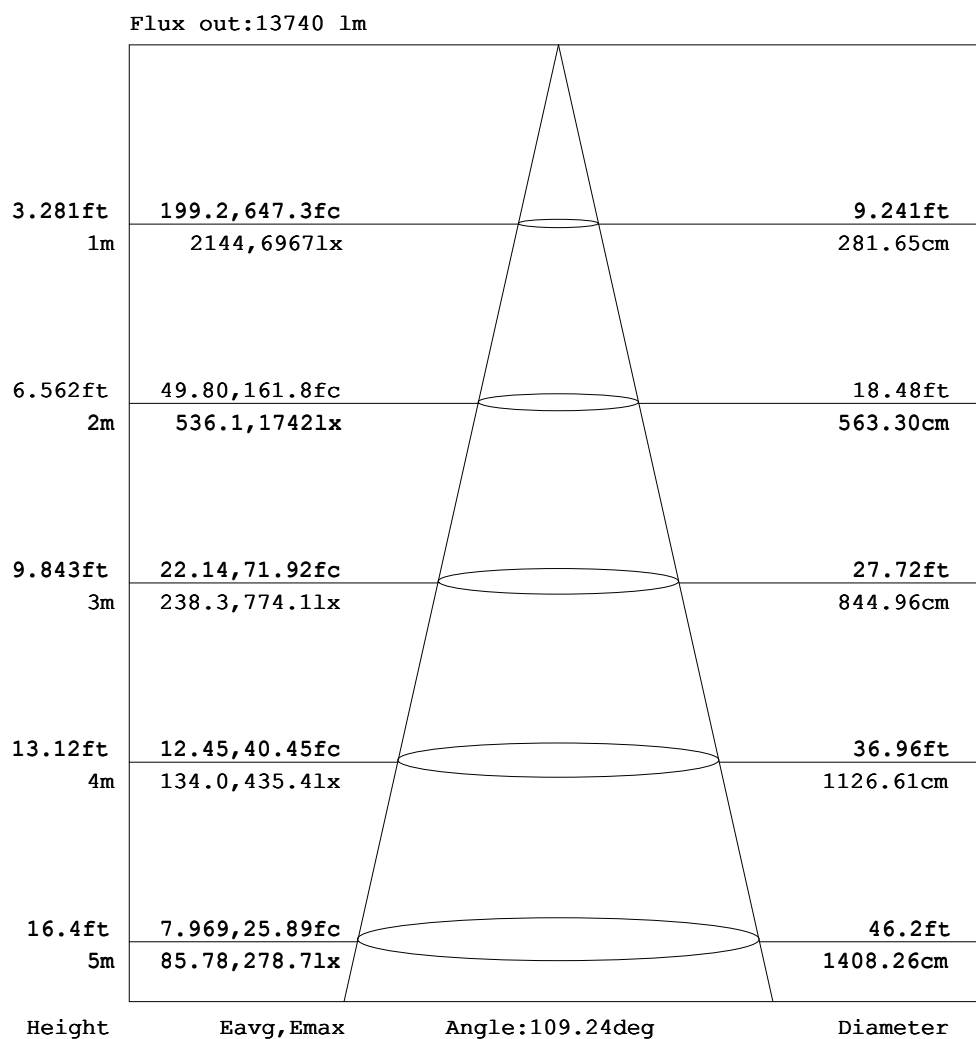


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-07-27

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks:

AAI Figure

Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm		
NAME: BT-PAR82 200W	TYPE:Frosted PC	WEIGHT:
SPEC.:5700K 120D 224LEDs	DIM.: 260*300mm	SERIAL No.:
MFR.: EVERFINE	SUR.:200mm*200mm	PROTECTION ANGLE:



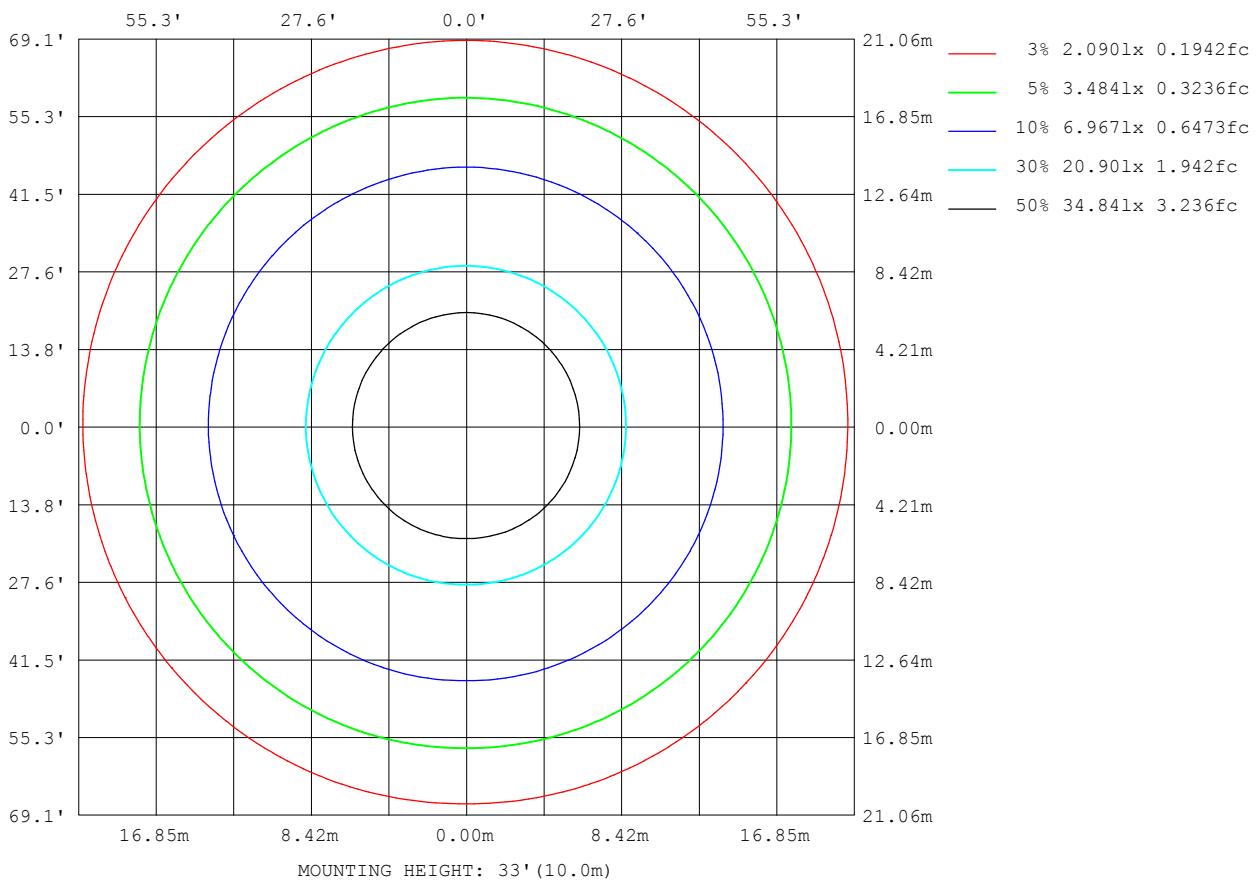
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-07-27

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

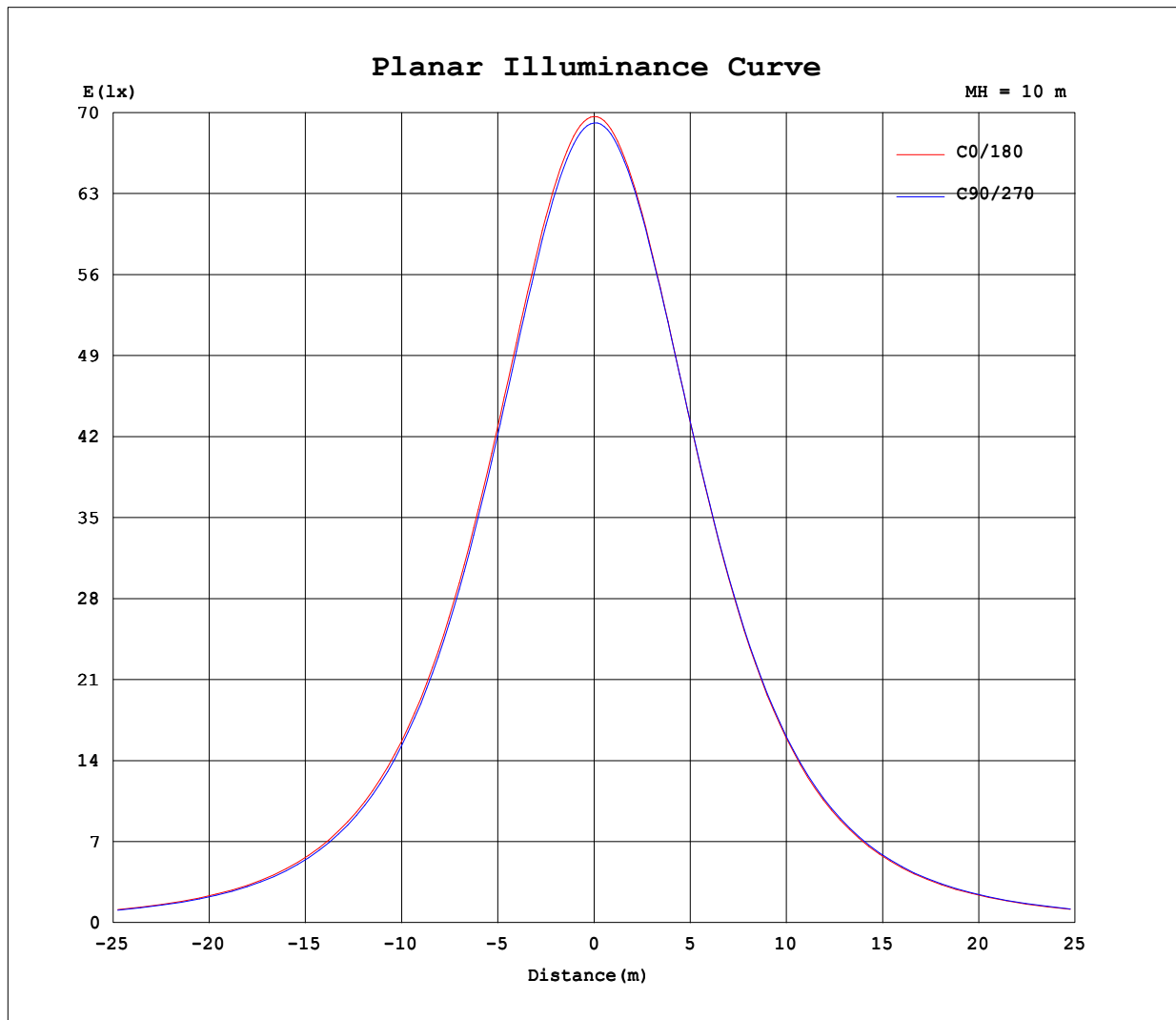
Test:U:110.5V I:1.875A P:200.0W PF:0.9657 Lamp Flux:21193x1 lm		
NAME: BT-PAR82 200W	TYPE:Frosted PC	WEIGHT:
SPEC.:5700K 120D 224LEDs	DIM.: 260*300mm	SERIAL No.:
MFR.: EVERFINE	SUR.:200mm*200mm	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:30DEG
 Operators:
 Test Date:2015-07-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.284
 Humidity:65.0%
 Test Distance:9.390m [K=1.0000]
 Remarks:

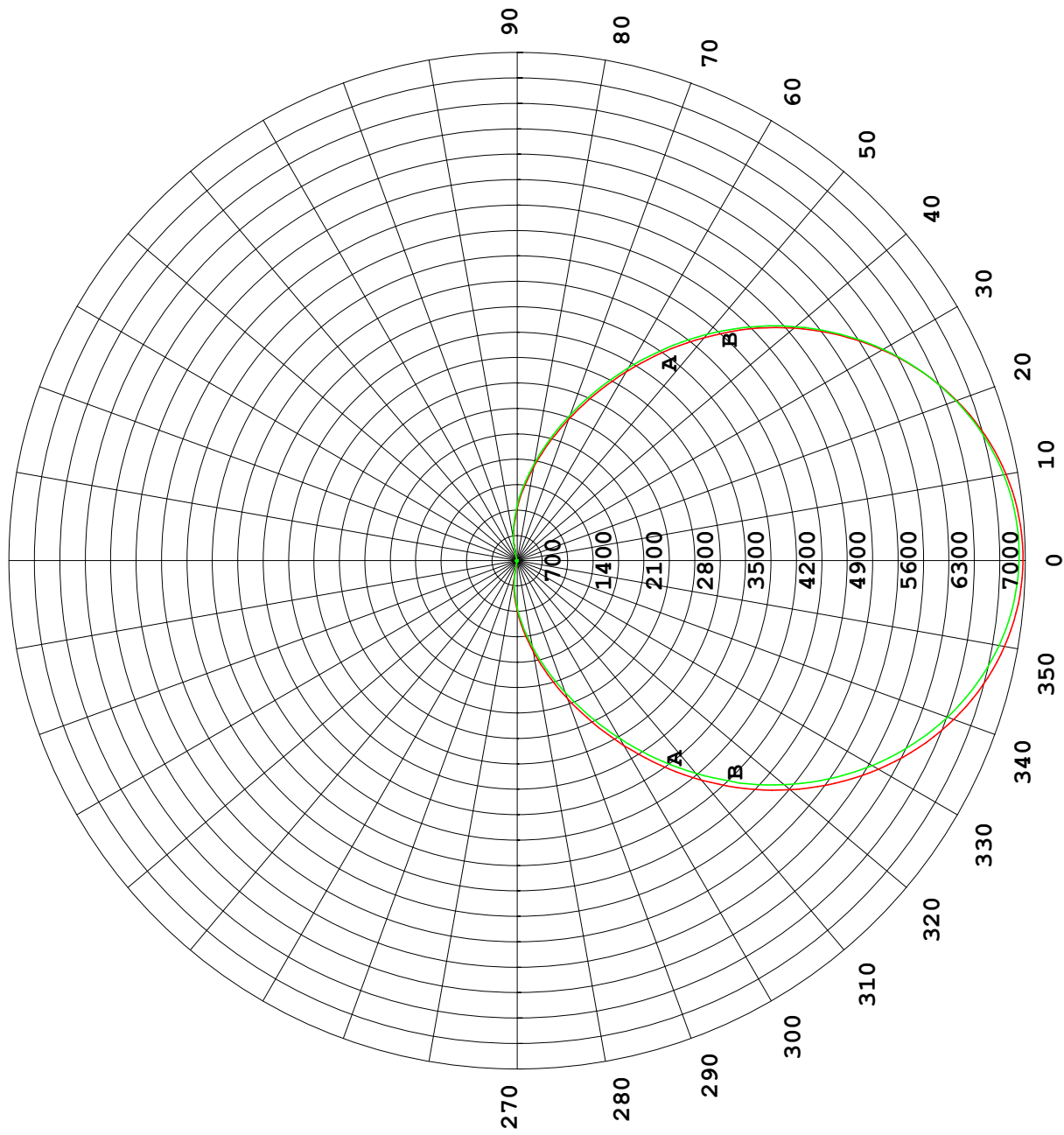
Planar Illuminance Curve

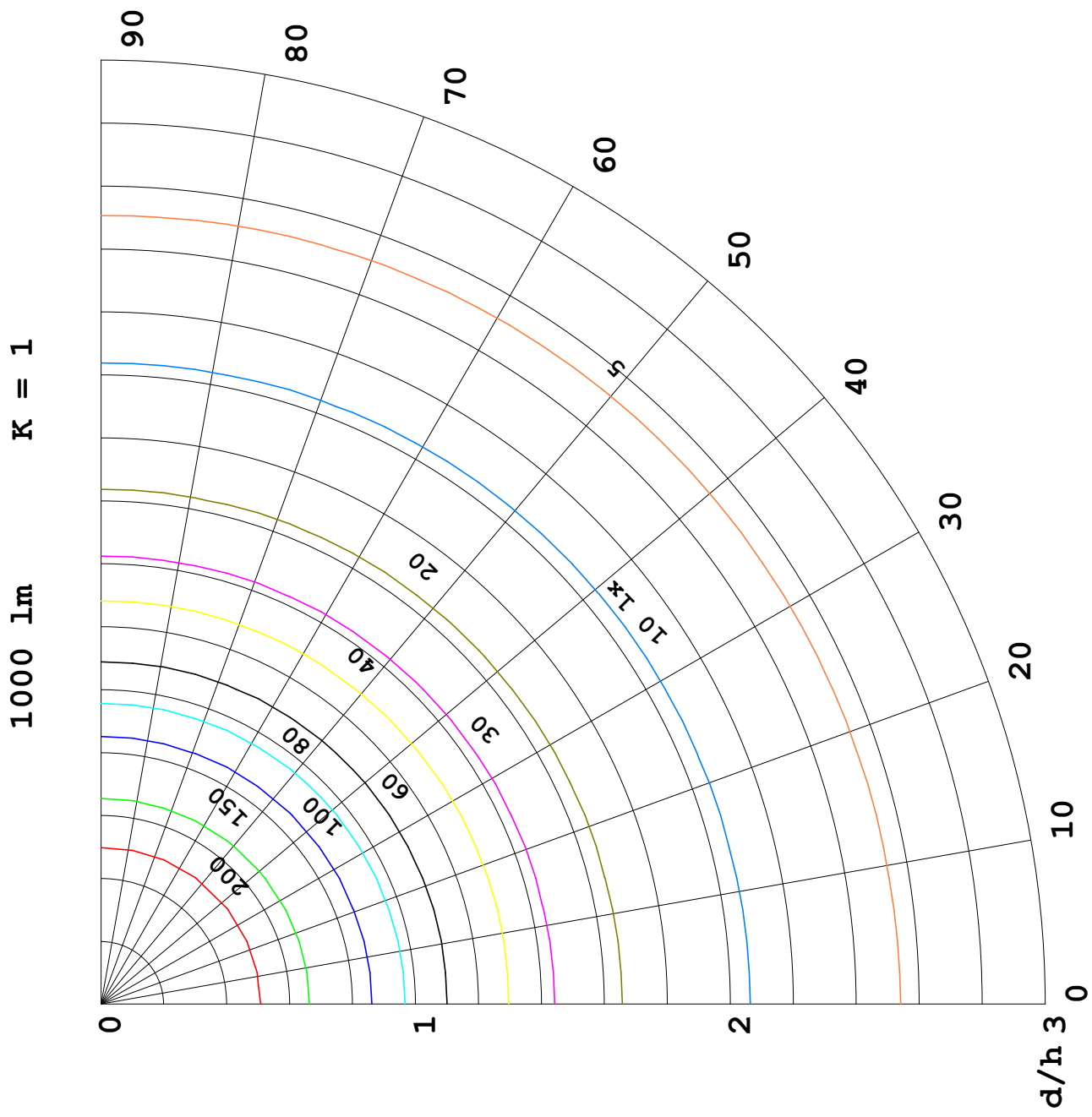


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 30DEG
Operators:
Test Date: 2015-07-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.284
Humidity: 65.0%
Test Distance: 9.390m [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

