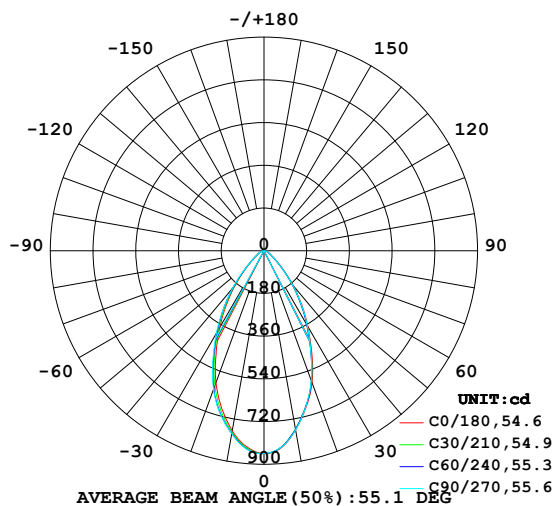


LUMINAIRE PHOTOMETRIC TEST REPORT

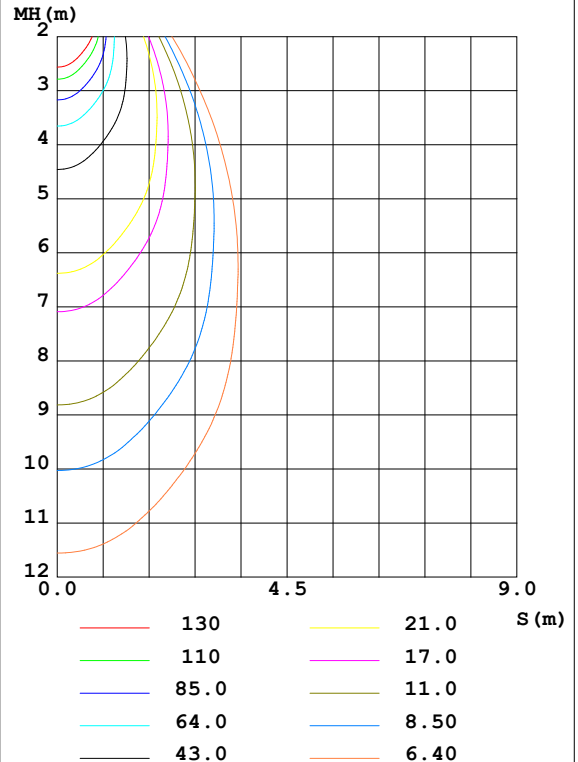
Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm					
NAME: PFM-10W		TYPE:4000K		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 83.78 lm/W
MODEL		I <sub>max</sub> (cd)	855.3	S/MH (C0/180)	0.82	
NOMINAL POWER (W)	10	LOR (%)	100.0	S/MH (C90/270)	0.86	
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	838.70	η UP,DN (C0-180)	0.0,49.2	
NOMINAL FLUX (lm)	838.699	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.8	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE (V)	230.1	η down (%)	100.0	CIBSE SHR MAX	0.90	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	767.0	765.0	767.3	772.5	770.2	776.5	783.1	770.5	0- 10	77.53	77.53	9.24, 9.24
20	592.5	587.2	581.9	588.7	591.6	609.5	621.3	601.3	10- 20	192.6	270.1	32.2, 32.2
30	370.4	363.9	365.1	368.3	374.2	389.6	402.1	382.3	20- 30	221.0	491.1	58.6, 58.6
40	191.7	185.4	186.4	185.9	186.8	195.8	205.0	192.4	30- 40	174.4	665.5	79.3, 79.3
50	73.17	68.84	69.64	70.28	71.66	71.25	74.77	71.26	40- 50	93.86	759.4	90.5, 90.5
60	29.59	30.47	30.16	31.31	31.41	30.25	30.34	30.22	50- 60	41.55	800.9	95.5, 95.5
70	15.54	15.55	15.95	16.50	15.90	15.73	15.61	15.50	60- 70	22.26	823.2	98.1, 98.1
80	7.568	7.530	7.826	8.182	7.821	7.545	7.469	7.465	70- 80	12.03	835.2	99.6, 99.6
90	0.0523	0.0418	0.0488	0.0453	0.0244	0.0383	0.0383	0.0523	80- 90	3.506	838.7	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 721.97 lm

%lum = 86.1%

%lamp = 86.1%

Conical surface Flux(120deg): 800.9 lm

%lum = 95.5%

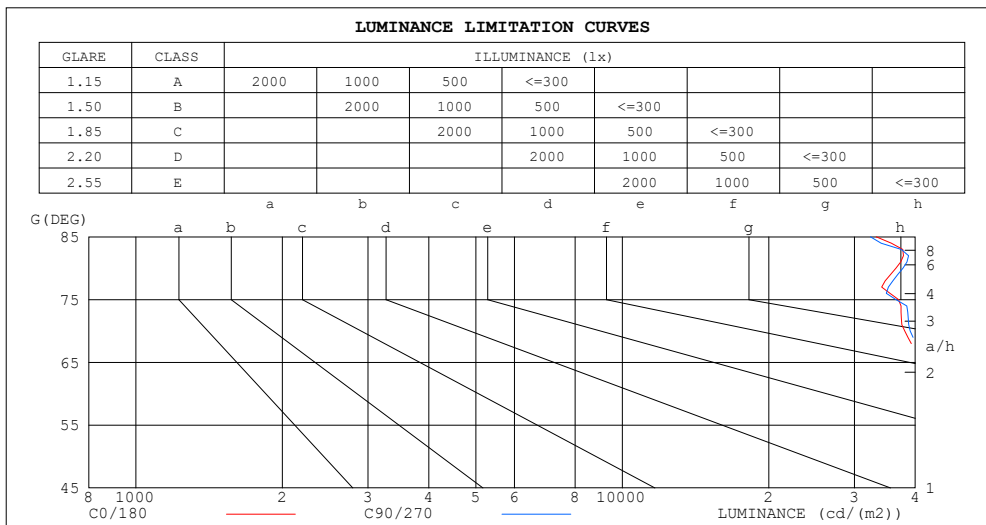
%lamp = 95.5%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jone  
 Test Date:2021-03-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
 Humidity:65.0%  
 Test Distance:7.030m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	33250	32368
80	36501	37745
75	36949	36504
70	38055	39062
65	43384	45195
60	49561	50528
55	65710	63996
50	95344	90734
45	144394	137046

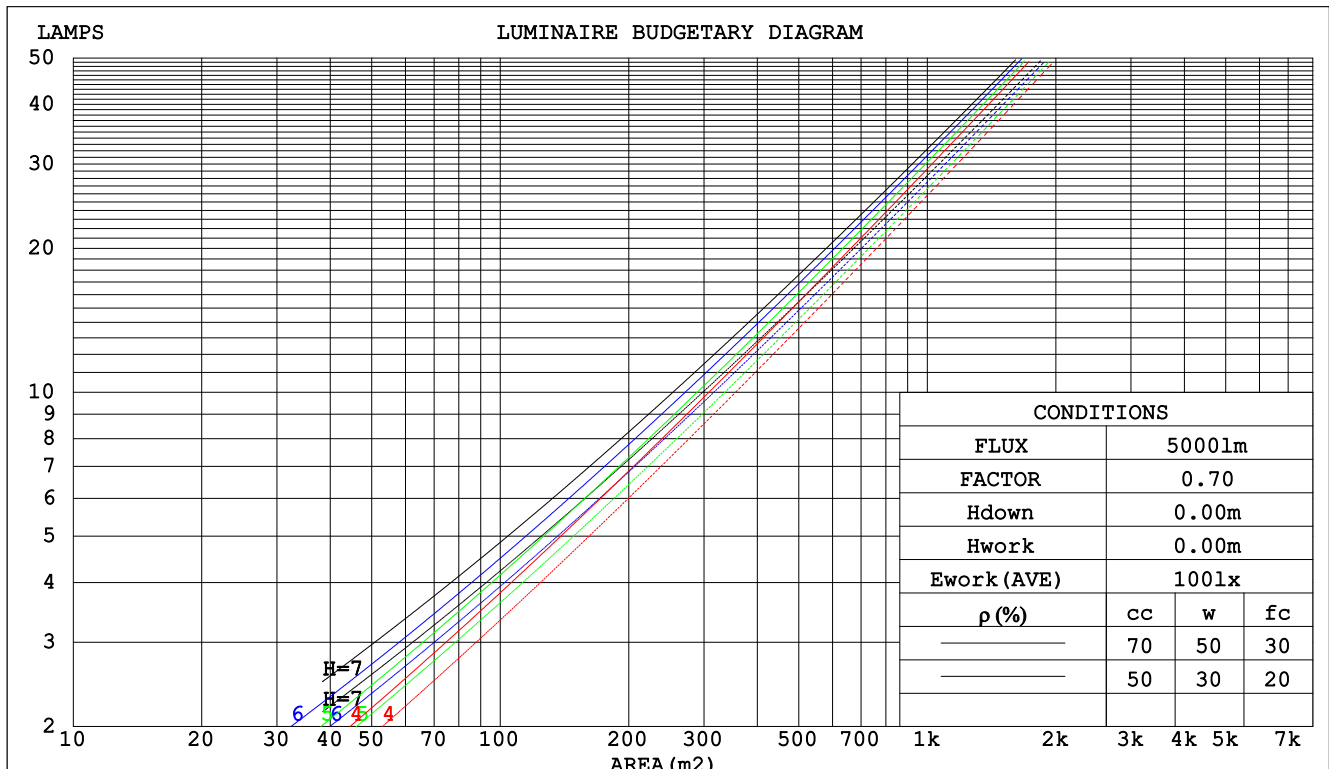
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding 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	1.19	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	1.00
1.0	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.96	.94	.93	.91
2.0	1.00	.95	.92	.98	.94	.90	.95	.92	.88	.92	.89	.87	.89	.87	.85	.83
3.0	.92	.86	.82	.91	.85	.81	.88	.83	.80	.85	.82	.79	.83	.80	.77	.76
4.0	.85	.79	.74	.84	.78	.73	.82	.77	.73	.80	.75	.72	.78	.74	.71	.69
5.0	.79	.72	.67	.78	.72	.67	.76	.71	.66	.74	.69	.66	.73	.68	.65	.64
6.0	.73	.67	.62	.72	.66	.62	.71	.65	.61	.69	.64	.61	.68	.64	.60	.59
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.53	.62	.57	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.54	.49	.60	.53	.49	.59	.53	.49	.58	.52	.49	.57	.52	.49	.47
10.0	.57	.50	.46	.56	.50	.46	.55	.50	.46	.54	.49	.46	.54	.49	.46	.44



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jone  
 Test Date:2021-03-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
 Humidity:65.0%  
 Test Distance:7.030m [K=1.0000]  
 Remarks:

### WEC AND CCEC

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm								
NAME: PFM-10W			TYPE:4000K			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.:			SUR.:			Shielding 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	.208	.118	.037	.201	.115	.036	.188	.108	.034	.177	.102	.033	.166	.096	.031		
2.0	.199	.109	.033	.193	.106	.033	.182	.101	.031	.172	.097	.030	.163	.092	.029		
3.0	.188	.100	.030	.183	.098	.030	.174	.094	.029	.165	.091	.028	.157	.087	.027		
4.0	.178	.092	.027	.174	.091	.027	.165	.088	.026	.158	.085	.026	.151	.082	.025		
5.0	.168	.086	.025	.165	.084	.025	.157	.082	.024	.151	.080	.024	.144	.077	.023		
6.0	.159	.080	.023	.156	.079	.023	.150	.077	.022	.144	.075	.022	.138	.073	.022		
7.0	.151	.075	.021	.148	.074	.021	.143	.072	.021	.137	.070	.020	.132	.069	.020		
8.0	.144	.070	.020	.141	.069	.020	.136	.068	.019	.131	.067	.019	.127	.065	.019		
9.0	.137	.066	.018	.135	.066	.018	.130	.064	.018	.126	.063	.018	.122	.062	.018		
10.0	.131	.063	.017	.128	.062	.017	.124	.061	.017	.120	.060	.017	.117	.059	.017		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.173	.157	.142	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.149	.114	.086	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.131	.088	.056	.113	.076	.049	.078	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.101	.062	.035	.070	.044	.025	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.096	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004	
9.0	.106	.061	.030	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm											
NAME: PFM-10W					TYPE:4000K			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:			Shielding 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	26.4	27.5	26.7	27.7	27.9	26.4	27.5	26.6	27.7	27.8	
	3H	26.7	27.7	27.0	27.9	28.1	26.7	27.7	27.0	27.9	28.1
	4H	26.9	27.8	27.1	28.0	28.3	26.8	27.8	27.1	28.0	28.2
	6H	27.0	27.9	27.3	28.1	28.4	27.0	27.9	27.3	28.1	28.4
	8H	27.0	27.9	27.4	28.2	28.4	27.1	27.9	27.4	28.2	28.4
	12H	27.1	27.9	27.4	28.2	28.5	27.1	27.9	27.4	28.2	28.5
4H	2H	26.4	27.4	26.7	27.6	27.8	26.4	27.3	26.7	27.6	27.8
	3H	26.9	27.7	27.2	27.9	28.2	26.8	27.7	27.2	27.9	28.2
	4H	27.1	27.8	27.5	28.2	28.5	27.1	27.8	27.5	28.1	28.5
	6H	27.3	28.0	27.7	28.3	28.7	27.4	28.0	27.7	28.3	28.7
	8H	27.5	28.1	27.9	28.4	28.8	27.5	28.1	27.9	28.4	28.8
	12H	27.5	28.1	28.0	28.5	28.9	27.6	28.1	28.0	28.5	28.9
8H	4H	27.1	27.8	27.5	28.1	28.5	27.1	27.7	27.5	28.1	28.5
	6H	27.5	28.0	27.9	28.4	28.8	27.5	28.0	27.9	28.4	28.8
	8H	27.7	28.1	28.1	28.6	29.0	27.7	28.2	28.2	28.6	29.0
	12H	27.8	28.2	28.3	28.7	29.1	27.8	28.2	28.3	28.7	29.1
12H	4H	27.1	27.7	27.5	28.1	28.5	27.1	27.7	27.5	28.1	28.4
	6H	27.5	28.0	28.0	28.4	28.8	27.5	28.0	28.0	28.4	28.8
	8H	27.7	28.1	28.2	28.6	29.0	27.8	28.1	28.2	28.6	29.1
Variations with the observer position at spacings:											
S = 1.0H	+ 1.1 / - 1.6					+ 1.1 / - 1.6					
1.5H	+ 1.9 / - 1.5					+ 1.9 / - 1.4					
2.0H	+ 2.5 / - 1.3					+ 2.3 / - 1.2					

CIE Pub.117, 838.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.6)  
Area: 0.00119398 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

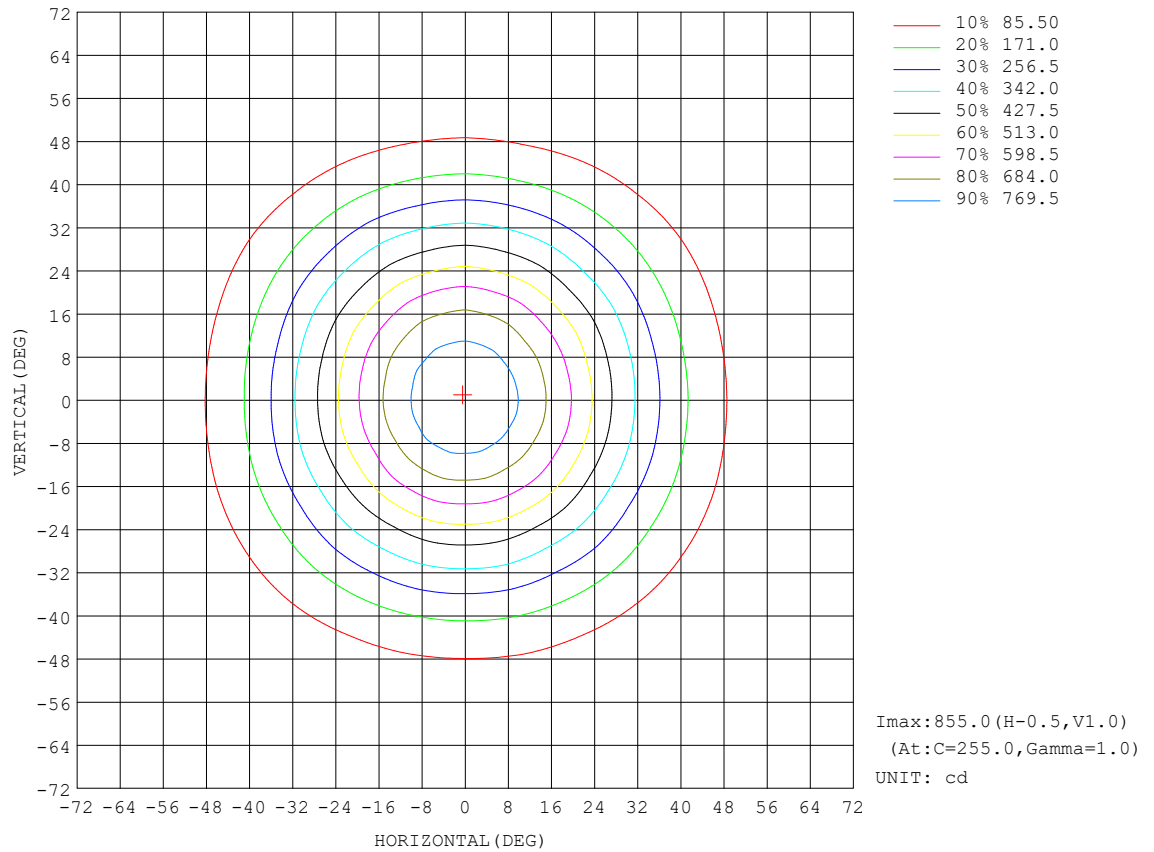
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	79	71	66	78	71	66	77	70	66	61
0.80	87	80	75	86	79	75	85	79	74	70
1.00	93	86	81	92	85	81	90	86	81	76
1.25	98	91	87	97	91	87	95	90	86	81
1.50	101	95	91	100	95	91	98	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	108	104	101	104	101	98	92
4.00	112	108	106	110	107	104	106	104	101	94
5.00	113	110	108	111	109	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: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



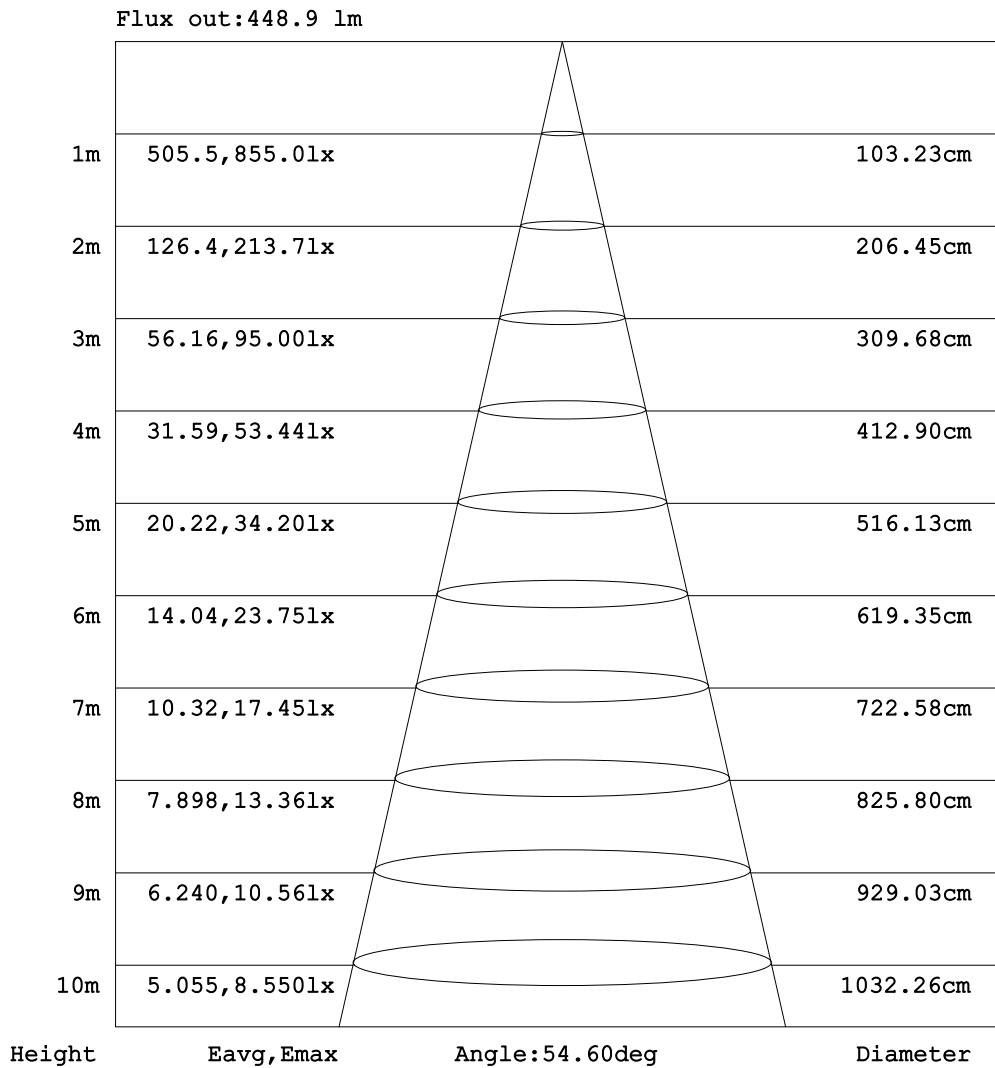
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:



AAI Figure

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



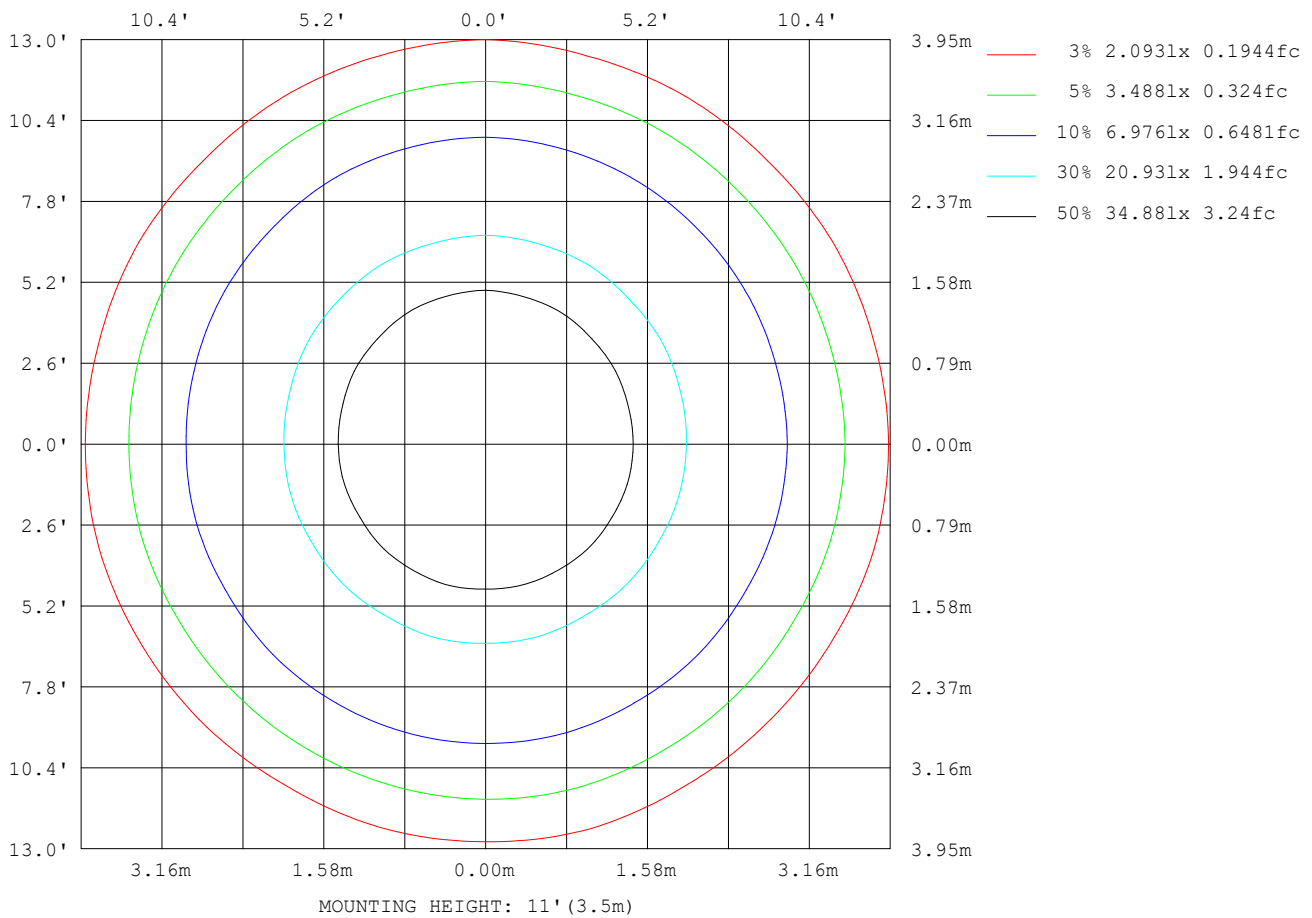
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
Humidity:65.0%  
Test Distance:7.030m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:230.10V I:0.0470A P:10.011W PF:0.9253 Freq:50.00Hz Lamp Flux:838.699x1 lm		
NAME: PFM-10W	TYPE:4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

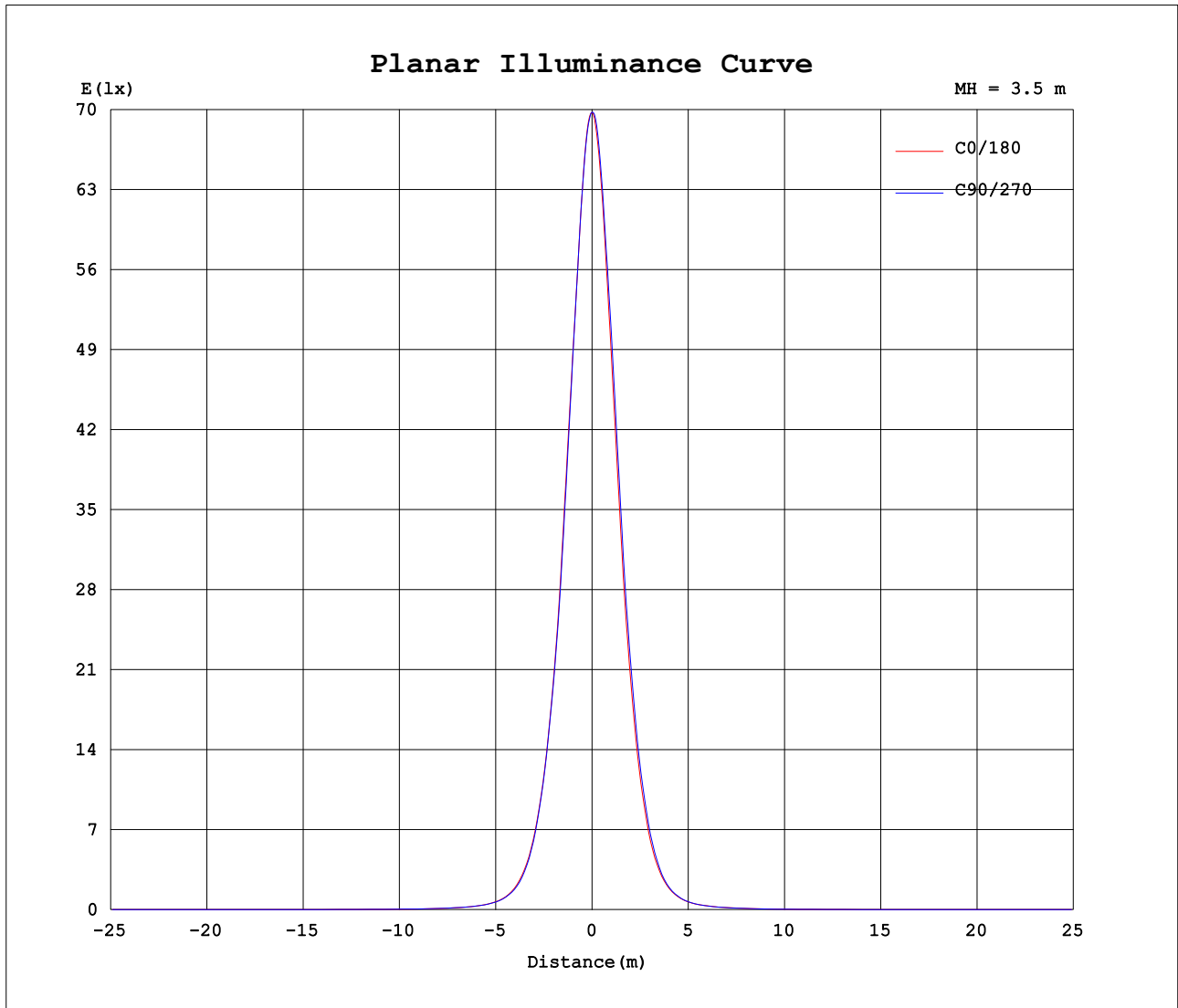
AvgL	cd/m2
L_0~180 (65) av	44369
L_0~180 (75) av	36524
L_0~180 (85) av	27796
L_90~270 (65) av	44774
L_90~270 (75) av	36577
L_90~270 (85) av	31123
L_45 (65) av	44666
L_45 (75) av	36675
L_45 (85) av	30514

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jone  
 Test Date:2021-03-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
 Humidity:65.0%  
 Test Distance:7.030m [K=1.0000]  
 Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jone  
 Test Date: 2021-03-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.270  
 Humidity: 65.0%  
 Test Distance: 7.030m [K=1.0000]  
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.270
Humidity:65.0%
Test Distance:7.030m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.270
Humidity:65.0%
Test Distance:7.030m [K=1.0000]
Remarks:

```