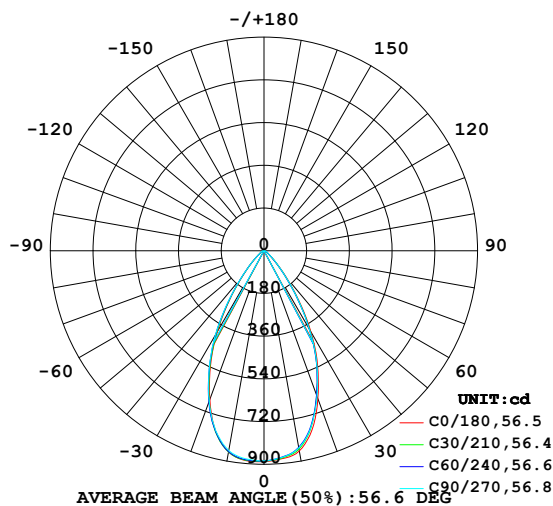


LUMINAIRE PHOTOMETRIC TEST REPORT

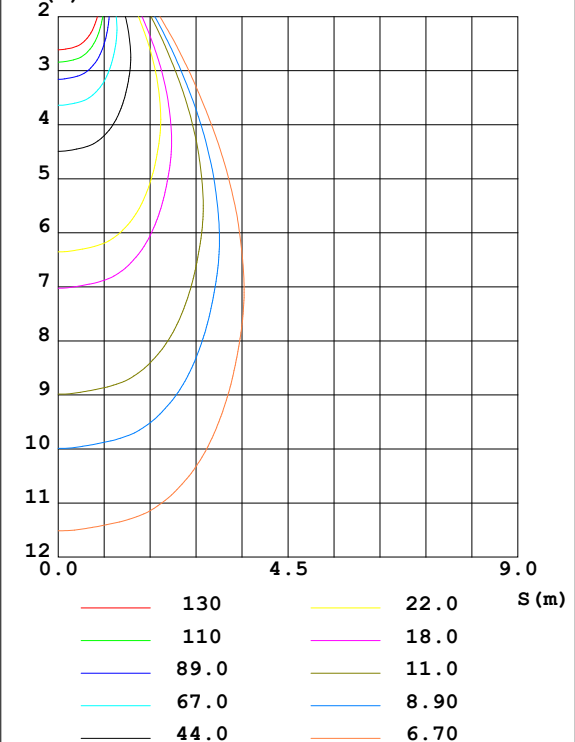
Test:U:230.10V I:0.0470A P:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm					
NAME: PFM-10W		TYPE:2700K		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 80.92 lm/W
MODEL		I <sub>max</sub> (cd)	889.3	S/MH (C0/180)	0.86	
NOMINAL POWER (W)	10	LOR (%)	100.0	S/MH (C90/270)	0.88	
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	809.32	η UP,DN (C0-180)	0.0,49.5	
NOMINAL FLUX (lm)	809.323	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.5	
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	856.6	847.6	843.4	853.0	860.8	858.8	854.7	854.1	0- 10	83.20	83.20	10.3,10.3
20	664.2	650.9	653.9	659.1	667.0	674.6	675.8	664.7	10- 20	215.8	299.0	36.9,36.9
30	396.0	388.6	382.2	389.5	393.3	398.4	409.9	397.2	20- 30	242.5	541.5	66.9,66.9
40	144.9	139.1	139.3	141.9	145.2	145.3	150.8	139.5	30- 40	159.4	700.9	86.6,86.6
50	37.67	36.96	39.84	41.59	42.26	41.51	43.63	37.50	40- 50	61.92	762.9	94.3,94.3
60	16.38	16.56	17.10	17.60	17.46	17.26	17.70	16.74	50- 60	22.51	785.4	97,97
70	9.806	9.820	10.13	10.67	10.68	10.63	10.32	9.884	60- 70	13.37	798.7	98.7,98.7
80	5.127	5.014	5.305	5.809	5.825	5.593	5.414	5.182	70- 80	8.084	806.8	99.7,99.7
90	0.0349	0.0279	0.0314	0.0349	0.0279	0.0418	0.0244	0.0314	80- 90	2.492	809.3	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): 740.22 lm

%lum = 91.5%

%lamp = 91.5%

Conical surface Flux(120deg): 785.37 lm

%lum = 97.0%

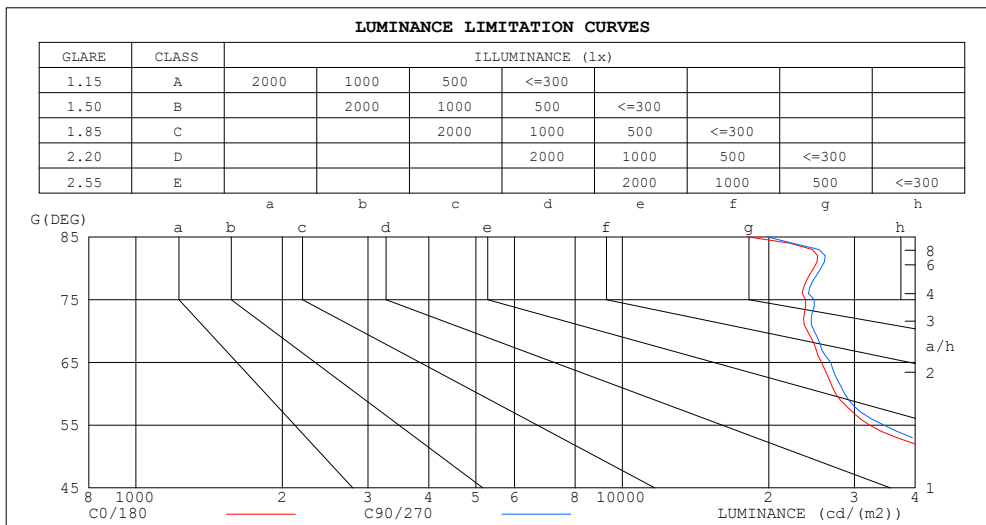
%lamp = 97.0%

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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	18100	19861
80	24728	25586
75	23804	24797
70	24013	24815
65	25663	26802
60	27440	28636
55	32212	34469
50	49081	51908
45	88113	87774

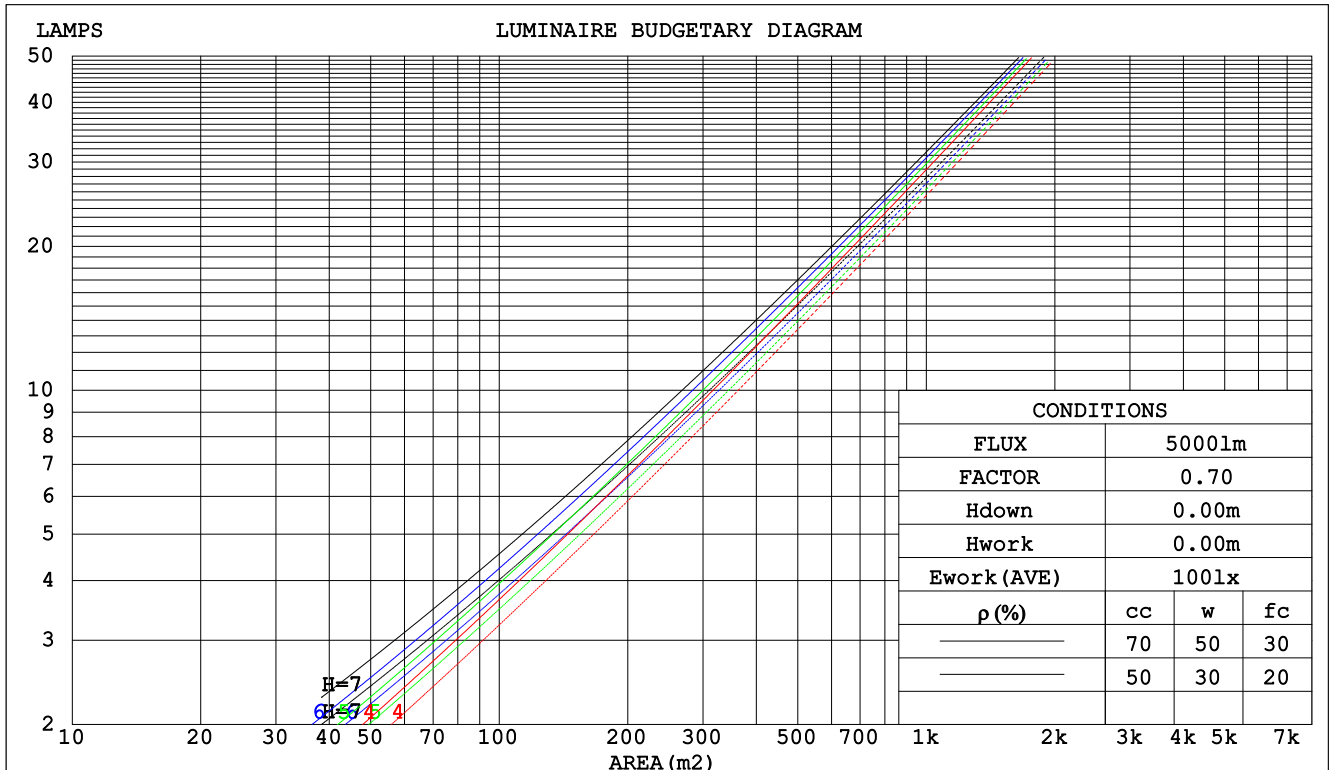
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

$\gamma$  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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	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	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	1.00	.00	.98	.97	.97	.95	.94	.92
2.0	1.02	.97	.94	.00	.96	.93	.97	.93	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.83	.80	.78
4.0	.88	.82	.77	.87	.81	.77	.84	.80	.76	.82	.78	.75	.80	.77	.74	.73
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.67
6.0	.77	.70	.66	.76	.70	.66	.74	.69	.65	.73	.68	.65	.71	.67	.64	.63
7.0	.72	.66	.61	.71	.65	.61	.70	.65	.61	.69	.64	.60	.68	.63	.60	.59
8.0	.68	.61	.57	.67	.61	.57	.66	.61	.57	.65	.60	.56	.64	.59	.56	.55
9.0	.64	.58	.53	.63	.57	.53	.62	.57	.53	.61	.57	.53	.61	.56	.53	.51
10.0	.60	.54	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.57	.53	.50	.48



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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm									
NAME: PFM-10W					TYPE:2700K			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	.193	.110	.035	.186	.106	.034	.174	.100	.032	.162	.093	.030	.151	.088	.028	
2.0	.184	.101	.031	.178	.098	.030	.168	.093	.029	.158	.088	.028	.149	.084	.026	
3.0	.174	.093	.028	.169	.091	.027	.160	.087	.026	.152	.083	.026	.144	.080	.025	
4.0	.165	.086	.025	.161	.084	.025	.153	.081	.024	.146	.078	.024	.139	.075	.023	
5.0	.157	.080	.023	.153	.079	.023	.146	.076	.022	.139	.074	.022	.133	.071	.021	
6.0	.149	.075	.021	.146	.074	.021	.139	.071	.021	.134	.069	.020	.128	.068	.020	
7.0	.142	.070	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019	.123	.064	.019	
8.0	.135	.066	.019	.132	.065	.018	.128	.064	.018	.123	.062	.018	.119	.061	.018	
9.0	.129	.062	.017	.127	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017	
10.0	.123	.059	.016	.121	.059	.016	.117	.058	.016	.114	.056	.016	.110	.055	.016	

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	.172	.157	.144	.147	.135	.124	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.120	.078	.048	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.103	.060	.031	.089	.052	.027	.061	.036	.019	.036	.022	.011	.012	.007	.004	
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm											
NAME: PFM-10W					TYPE:2700K			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	24.5	25.6	24.8	25.7	25.9	24.5	25.5	24.7	25.6	25.8	
	3H	24.7	25.6	25.0	25.8	26.0	24.6	25.6	24.9	25.8	26.0
	4H	24.8	25.7	25.1	25.9	26.1	24.7	25.6	25.0	25.9	26.1
	6H	24.9	25.7	25.2	26.0	26.2	24.9	25.7	25.2	25.9	26.2
	8H	25.0	25.7	25.3	26.0	26.3	24.9	25.7	25.2	26.0	26.2
	12H	25.0	25.7	25.3	26.0	26.3	25.0	25.7	25.3	26.0	26.3
4H	2H	24.4	25.3	24.7	25.5	25.8	24.4	25.2	24.6	25.5	25.7
	3H	24.7	25.5	25.0	25.8	26.0	24.7	25.4	25.0	25.7	26.0
	4H	24.9	25.6	25.3	25.9	26.2	24.9	25.6	25.2	25.9	26.2
	6H	25.1	25.7	25.5	26.1	26.4	25.1	25.7	25.5	26.1	26.4
	8H	25.2	25.8	25.6	26.2	26.5	25.2	25.8	25.6	26.2	26.5
	12H	25.3	25.8	25.7	26.2	26.6	25.3	25.8	25.7	26.2	26.6
8H	4H	24.9	25.5	25.3	25.8	26.2	24.9	25.5	25.3	25.8	26.2
	6H	25.2	25.7	25.7	26.1	26.5	25.2	25.7	25.7	26.1	26.5
	8H	25.4	25.8	25.9	26.3	26.7	25.4	25.8	25.9	26.2	26.7
	12H	25.5	25.9	26.0	26.3	26.8	25.5	25.9	26.0	26.3	26.8
12H	4H	24.9	25.4	25.3	25.8	26.2	24.9	25.4	25.3	25.8	26.2
	6H	25.3	25.7	25.7	26.1	26.5	25.2	25.7	25.7	26.1	26.5
	8H	25.5	25.8	25.9	26.3	26.7	25.5	25.8	25.9	26.3	26.7
Variations with the observer position at spacings:											
S = 1.0H	+ 1.8 / - 2.3					+ 1.7 / - 2.2					
1.5H	+ 3.4 / - 2.3					+ 3.1 / - 2.2					
2.0H	+ 2.7 / - 1.1					+ 2.6 / - 1.0					

CIE Pub.117, 809.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.7)  
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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

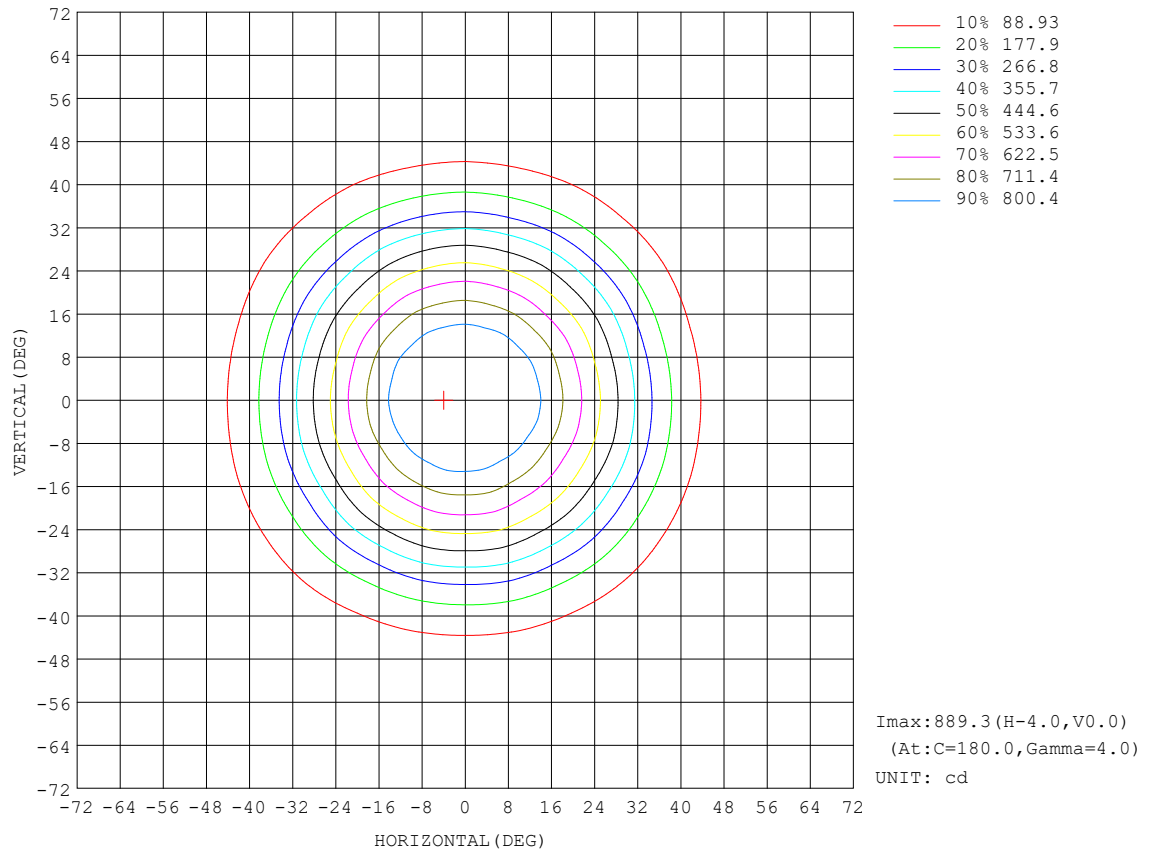
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	83	76	72	83	76	72	82	76	72	68
0.80	91	84	80	90	84	80	89	84	80	76
1.00	96	90	86	95	89	86	94	89	85	81
1.25	101	95	91	100	94	90	98	93	90	85
1.50	104	98	95	102	98	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	105	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	109	112	110	108	108	106	105	97
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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



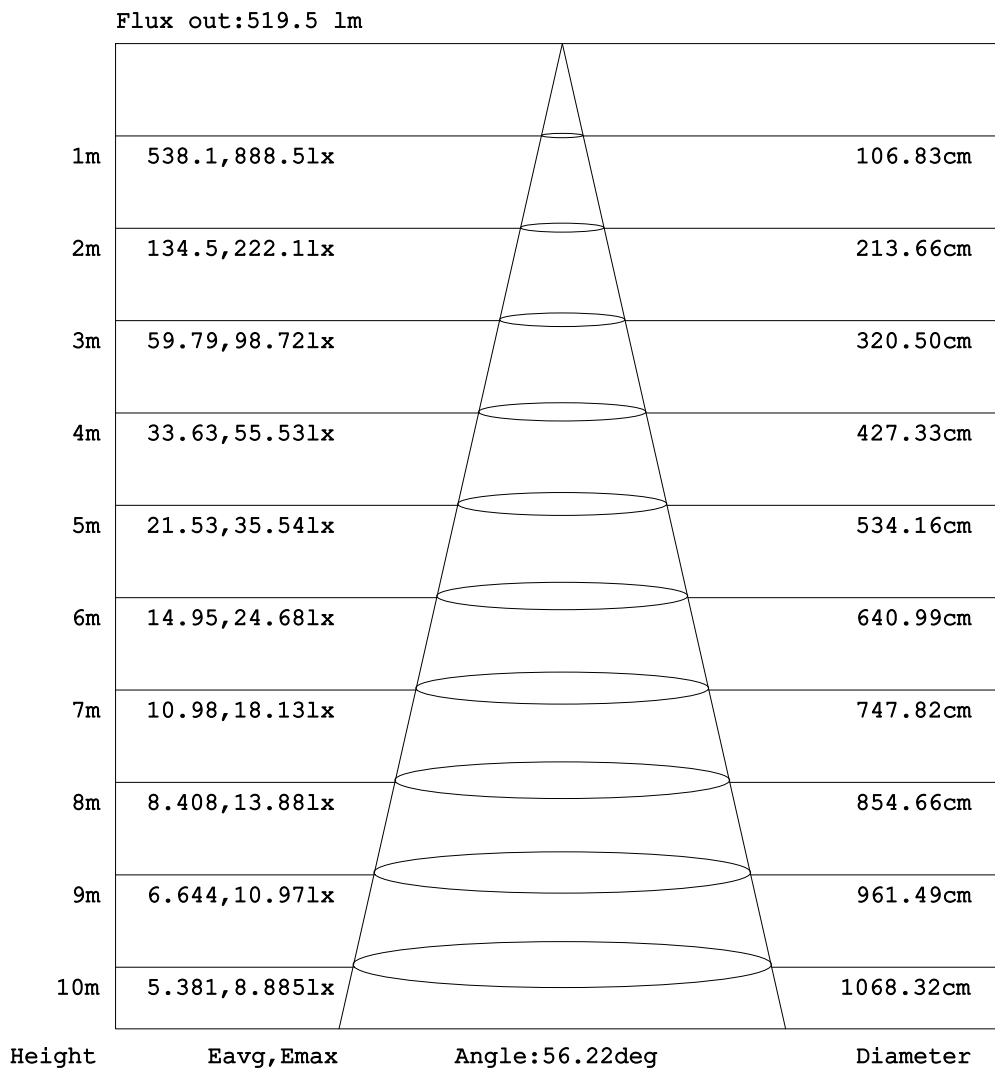
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jone  
Test Date:2021-03-11

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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



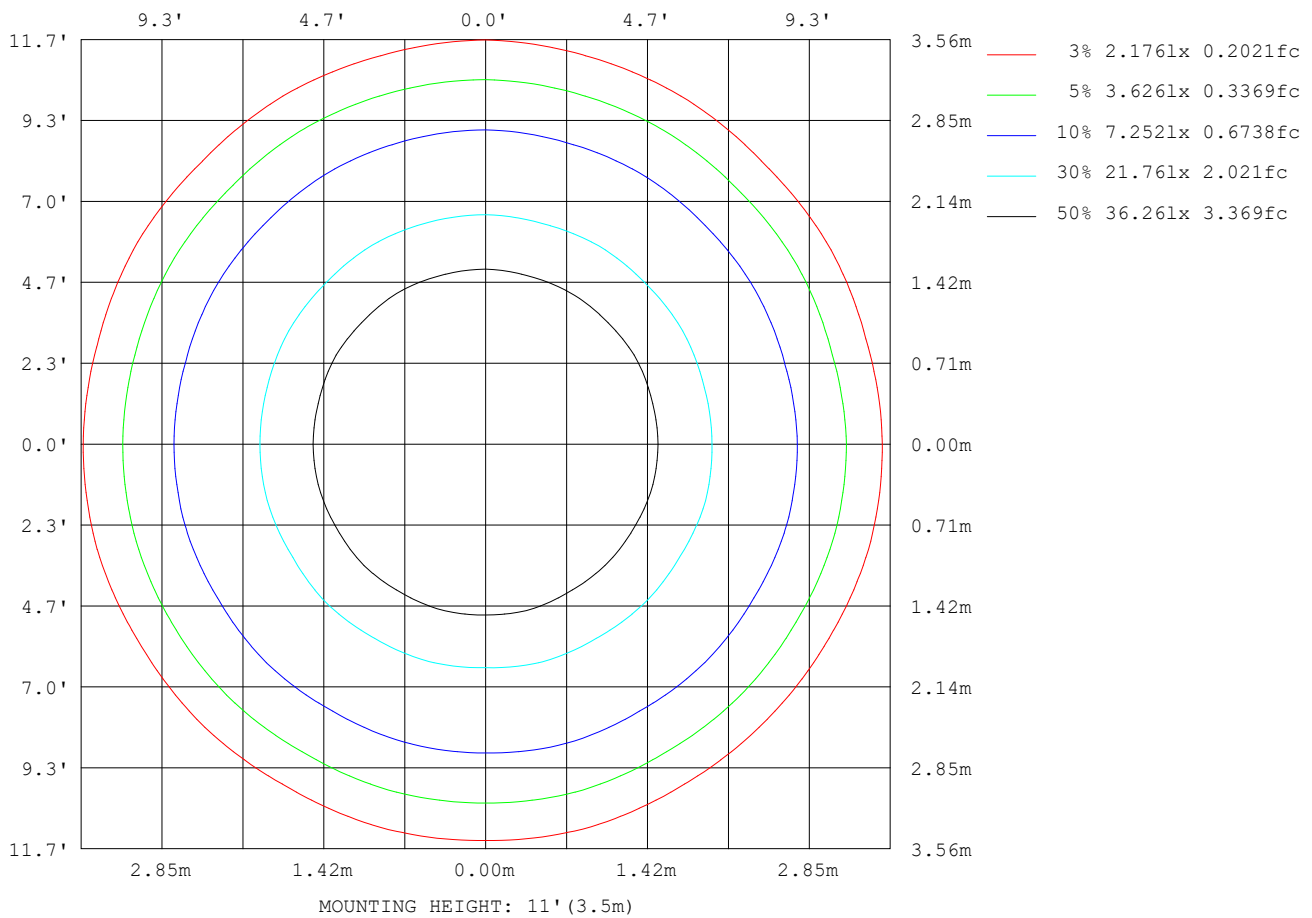
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

$\gamma$  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:

**ISOLUX DIAGRAM**

Test:U:230.10V I:0.0470A P:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	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:10.001W PF:0.9250 Freq:50.00Hz Lamp Flux:809.323x1 lm		
NAME: PFM-10W	TYPE:2700K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

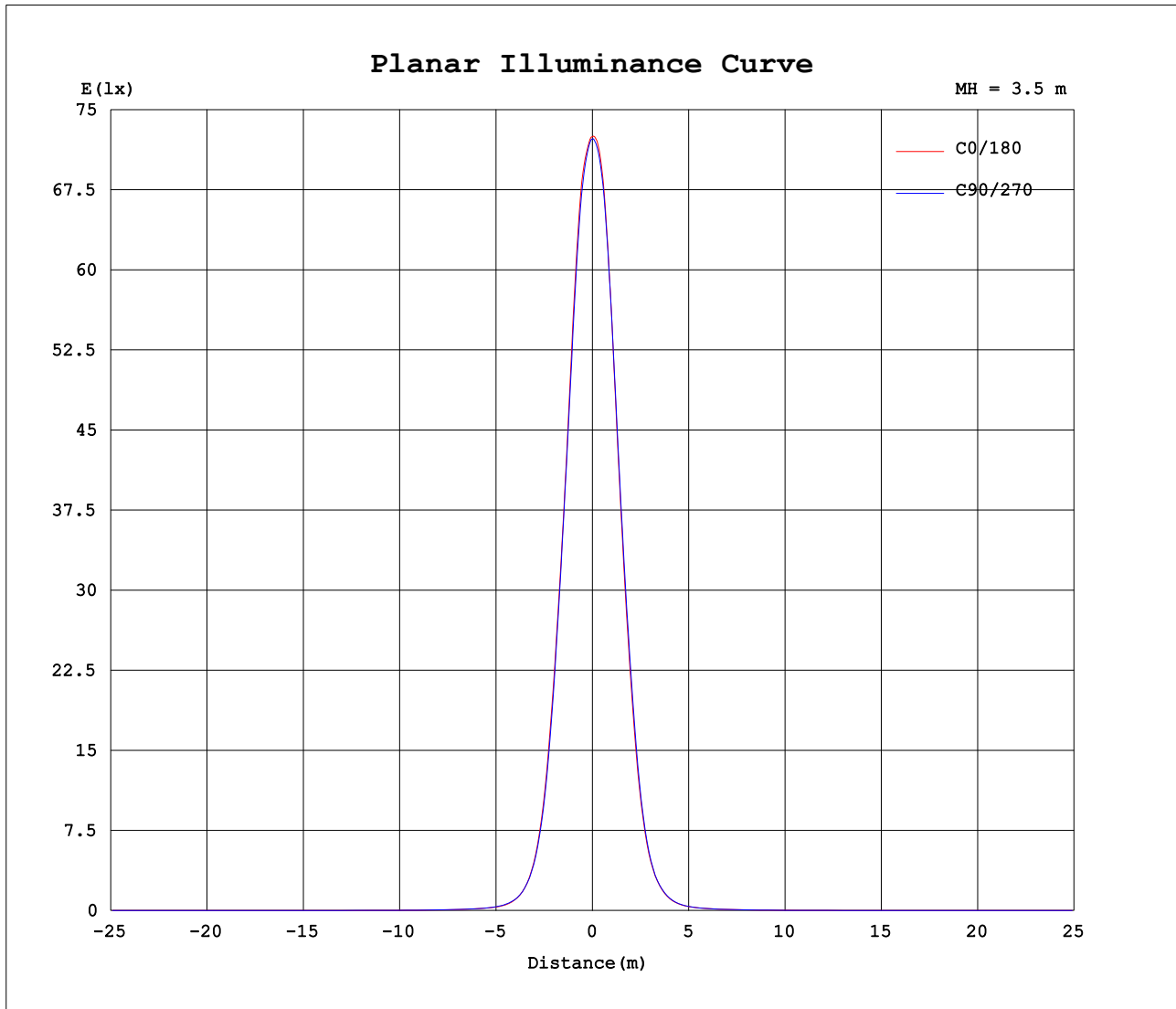
AvgL	cd/m2
L_0~180 (65) av	26510
L_0~180 (75) av	24907
L_0~180 (85) av	21972
L_90~270 (65) av	26955
L_90~270 (75) av	24851
L_90~270 (85) av	21397
L_45 (65) av	26663
L_45 (75) av	24866
L_45 (85) av	21549

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:

```