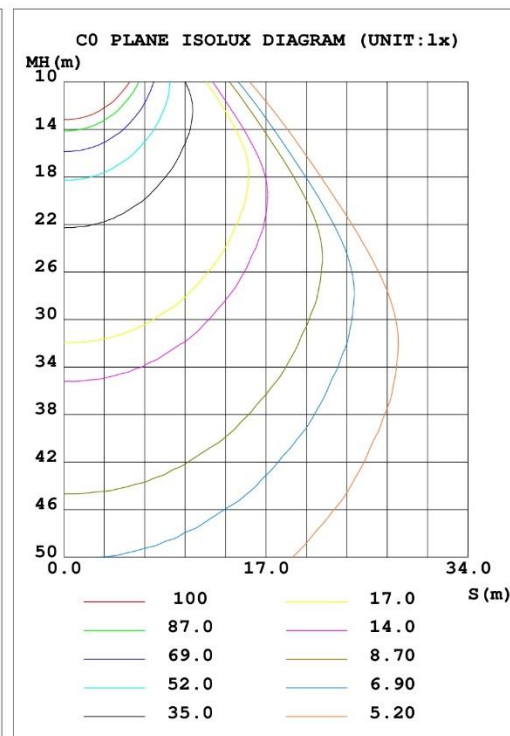
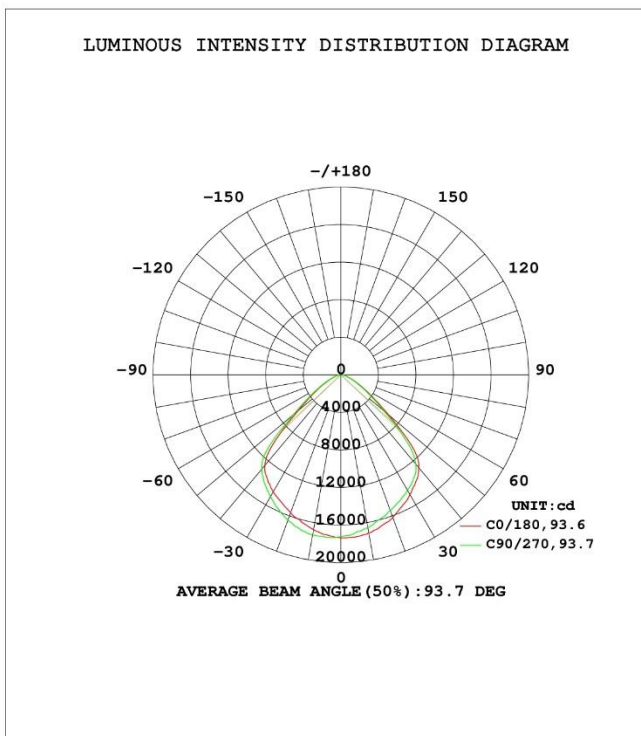


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm		
NAME: UFOA00-200W-R090-C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:D 0.325	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 185.84 lm/W			
MODEL	UFOA00-200W-R090-C	I _{max} (cd)	17379	S/MH (C0/180)	1.24
NOMINAL POWER (W)	200	LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	100-240	TOTAL FLUX (lm)	36673	η UP, DN (C0-180)	1.4, 48.0
NOMINAL FLUX (lm)	36672.8	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.4, 49.2
LAMPS INSIDE	1	η up (%)	2.8	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	97.2	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 28.5DEG
 Operators: lishengchi
 Test Date: 2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 55.0%
 Test Distance: 11.340m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1710	1674	1656	1644	1674	1708	1733	1729	0- 10	1631	1631	4.45,4.45
20	1618	1574	1537	1533	1564	1608	1646	1641	10- 20	4643	6274	17.1,17.1
30	1473	1443	1417	1416	1440	1467	1496	1493	20- 30	7038	13312	36.3,36.3
40	1291	1274	1241	1226	1259	1289	1309	1299	30- 40	8616	21929	59.8,59.8
50	657.2	638.5	602.0	586.3	600.1	634.7	660.3	666.4	40- 50	7630	29559	80.6,80.6
60	259.8	254.4	238.4	240.7	233.5	246.4	258.0	268.3	50- 60	3654	33213	90.6,90.6
70	101.8	96.92	92.83	90.73	87.19	91.32	96.41	101.7	60- 70	1597	34810	94.9,94.9
80	35.04	33.54	31.74	30.49	29.09	30.85	31.53	33.85	70- 80	615.8	35426	96.6,96.6
90	14.05	14.05	13.88	13.79	13.58	13.57	13.55	13.47	80- 90	204.2	35630	97.2,97.2
100	13.58	13.55	13.58	13.52	13.75	13.80	13.73	13.62	90-100	148.7	35779	97.6,97.6
110	14.08	14.18	14.26	14.19	14.60	14.44	14.40	14.32	100-110	147.2	35926	98,98
120	15.40	15.58	15.68	15.64	15.96	15.77	15.62	15.55	110-120	148.3	36074	98.4,98.4
130	17.13	17.33	17.40	17.37	17.61	17.36	17.19	17.10	120-130	147.6	36222	98.8,98.8
140	18.79	18.96	19.00	19.04	19.18	18.89	18.78	18.74	130-140	140.2	36362	99.2,99.2
150	20.35	20.40	20.45	20.56	20.64	20.43	20.30	20.26	140-150	123.2	36485	99.5,99.5
160	22.21	22.29	22.30	22.41	22.58	22.32	22.31	22.15	150-160	98.56	36584	99.8,99.8
170	24.05	24.02	24.05	24.14	24.22	24.10	24.07	24.04	160-170	65.61	36650	99.9,99.9
180	24.93	24.88	24.80	24.86	24.95	24.86	24.78	24.85	170-180	23.33	36673	100,100
DEG	LUMINOUS INTENSITY:×10cd								UNIT:lm			

Conical surface Flux(90deg): 26257 lm

%lum = 71.6%
%lamp = 71.6%

Conical surface Flux(120deg): 33213 lm

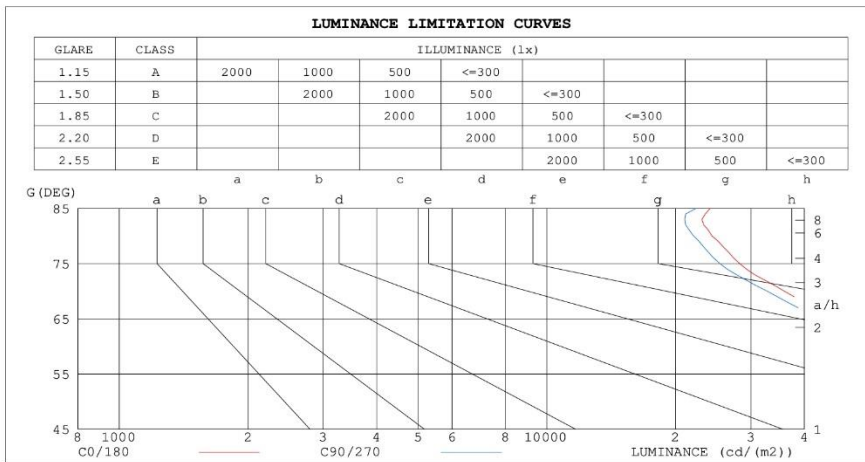
%lum = 90.6%
%lamp = 90.6%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:28.5DEG
Operators:lishengchi
Test Date:2018-12-04

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:55.0%
Test Distance:11.340m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm		
NAME: UFOA00-200W-R090-C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:D 0.325	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	24089	22342
80	24314	22025
75	28208	25382
70	35876	32700
65	47203	43278
60	62603	57457
55	86529	79612
50	123175	112832
45	181320	166044

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:28.5DEG
 Operators:lishengchi
 Test Date:2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:55.0%
 Test Distance:11.340m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm		
NAME: UFOA00-200W-R090-C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:D 0.325	Shielding Angle:

ρcc	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						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.241	.137	.043	.233	.133	.042	.219	.126	.040	.205	.118	.038	.193	.112	.036	
2.0	.233	.128	.039	.226	.125	.038	.214	.119	.037	.202	.113	.035	.191	.108	.034	
3.0	.222	.118	.035	.216	.116	.035	.205	.111	.034	.194	.106	.033	.185	.102	.032	
4.0	.209	.109	.032	.204	.107	.032	.194	.103	.031	.185	.099	.030	.177	.096	.029	
5.0	.198	.101	.029	.193	.099	.029	.184	.096	.028	.176	.093	.028	.168	.090	.027	
6.0	.187	.093	.027	.182	.092	.027	.174	.089	.026	.167	.087	.026	.160	.084	.025	
7.0	.176	.087	.025	.172	.086	.024	.165	.084	.024	.159	.081	.024	.152	.079	.023	
8.0	.167	.081	.023	.163	.080	.023	.157	.078	.022	.151	.076	.022	.145	.074	.022	
9.0	.158	.076	.021	.155	.075	.021	.149	.074	.021	.143	.072	.021	.138	.070	.020	
10.0	.150	.072	.020	.147	.071	.020	.142	.069	.020	.137	.068	.019	.132	.066	.019	

ρcc	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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.212	.212	.212	.181	.181	.181	.124	.124	.124	.071	.071	.071	.023	.023	.023	
1.0	.197	.179	.162	.169	.153	.139	.116	.105	.096	.066	.061	.056	.021	.020	.018	
2.0	.186	.154	.127	.160	.133	.110	.109	.092	.077	.063	.053	.045	.020	.017	.015	
3.0	.177	.136	.103	.152	.117	.090	.104	.082	.063	.060	.048	.037	.019	.015	.012	
4.0	.169	.122	.086	.145	.106	.075	.100	.074	.053	.058	.043	.031	.019	.014	.010	
5.0	.162	.112	.074	.139	.097	.065	.096	.067	.046	.056	.040	.027	.018	.013	.009	
6.0	.155	.103	.065	.134	.089	.057	.092	.062	.040	.053	.037	.024	.017	.012	.008	
7.0	.149	.096	.059	.128	.083	.051	.089	.058	.036	.052	.034	.022	.017	.011	.007	
8.0	.144	.090	.054	.124	.078	.047	.085	.055	.033	.050	.032	.020	.016	.011	.007	
9.0	.138	.085	.050	.119	.074	.043	.082	.052	.031	.048	.031	.018	.016	.010	.006	
10.0	.133	.081	.046	.115	.070	.041	.080	.050	.029	.046	.029	.017	.015	.010	.006	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:28.5DEG
 Operators:lishengchi
 Test Date:2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:55.0%
 Test Distance:11.340m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm										
NAME: UFOA00-200W-R090-C					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.:					SUR.:D 0.325			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	15.5	16.7	15.8	17.0	17.2	15.2	16.5	15.5	16.7	17.0
3H	15.6	16.8	16.0	17.1	17.3	15.3	16.5	15.7	16.8	17.1
4H	15.7	16.8	16.0	17.0	17.3	15.4	16.5	15.7	16.7	17.0
6H	15.7	16.7	16.0	17.0	17.3	15.3	16.4	15.7	16.7	17.0
8H	15.6	16.6	16.0	16.9	17.3	15.3	16.3	15.7	16.6	17.0
12H	15.6	16.6	16.0	16.9	17.3	15.3	16.3	15.7	16.6	16.9
4H 2H	15.5	16.6	15.8	16.8	17.1	15.2	16.3	15.6	16.6	16.9
3H	15.7	16.7	16.1	17.0	17.3	15.5	16.4	15.8	16.7	17.1
4H	15.8	16.6	16.2	17.0	17.4	15.5	16.4	15.9	16.7	17.1
6H	15.8	16.6	16.3	17.0	17.4	15.6	16.3	16.0	16.7	17.1
8H	15.9	16.6	16.3	17.0	17.4	15.6	16.3	16.0	16.7	17.1
12H	15.9	16.5	16.3	16.9	17.4	15.6	16.2	16.0	16.6	17.1
8H 4H	15.7	16.4	16.2	16.8	17.3	15.5	16.2	15.9	16.6	17.0
6H	15.8	16.4	16.3	16.9	17.3	15.6	16.1	16.1	16.6	17.1
8H	15.9	16.4	16.4	16.9	17.4	15.6	16.1	16.1	16.6	17.1
12H	15.9	16.4	16.4	16.8	17.4	15.6	16.1	16.2	16.6	17.1
12H 4H	15.7	16.3	16.2	16.8	17.2	15.4	16.1	15.9	16.5	17.0
6H	15.8	16.3	16.3	16.8	17.3	15.6	16.1	16.1	16.5	17.0
8H	15.9	16.3	16.4	16.8	17.3	15.6	16.0	16.1	16.5	17.1
Variations with the observer position at spacings:										
S = 1.0H	+ 1.4 / - 1.7					+ 1.5 / - 1.8				
1.5H	+ 1.0 / - 1.4					+ 0.9 / - 1.3				
2.0H	+ 3.1 / - 2.4					+ 3.0 / - 2.3				

CIE Pub.117, 36673 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 12.5)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:28.5DEG
 Operators:lishengchi
 Test Date:2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:55.0%
 Test Distance:11.340m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm		
NAME: UFOA00-200W-R090-C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:D 0.325	Shielding Angle:

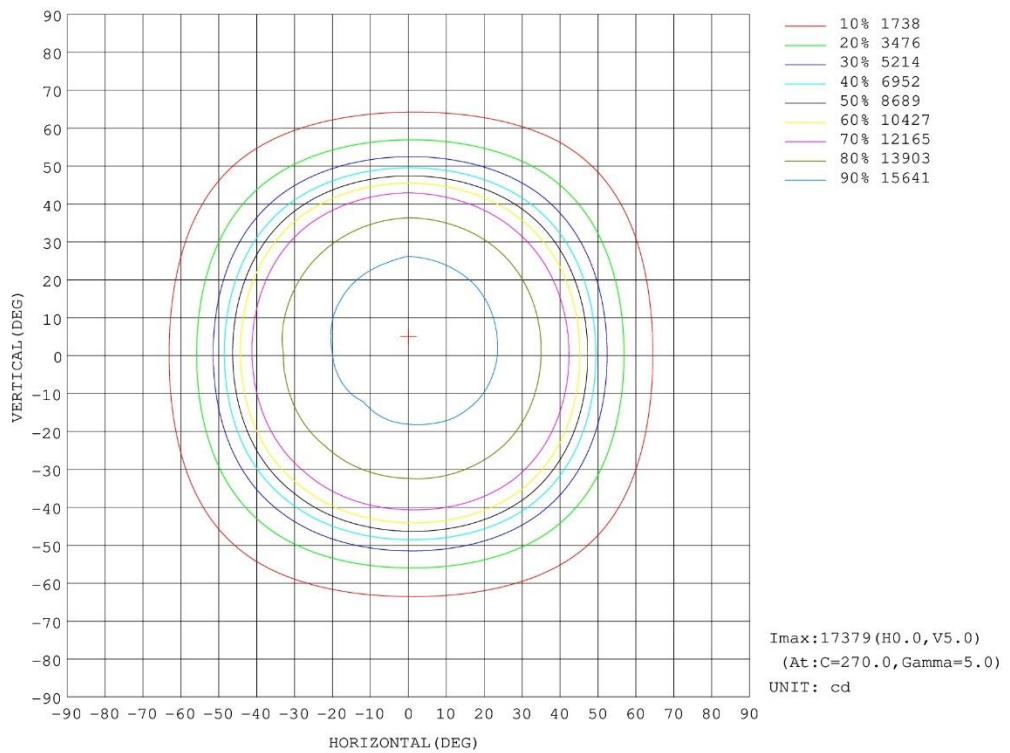
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	66	56	50	65	56	50	64	55	50	44
0.80	76	67	60	75	66	60	73	65	60	54
1.00	84	75	69	83	75	69	81	75	68	62
1.25	91	82	77	89	82	76	87	80	75	69
1.50	95	87	82	93	86	81	90	84	80	73
2.00	100	94	89	99	93	88	95	90	86	79
2.50	103	97	93	101	96	91	97	93	89	81
3.00	106	101	96	104	99	95	99	96	92	84
4.00	109	104	101	106	102	99	102	99	96	87
5.00	111	107	104	108	105	102	103	101	98	89
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:28.5DEG
 Operators:lishengchi
 Test Date:2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:55.0%
 Test Distance:11.340m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm		
NAME: UFOA00-200W-R090-C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:D 0.325	Shielding Angle:

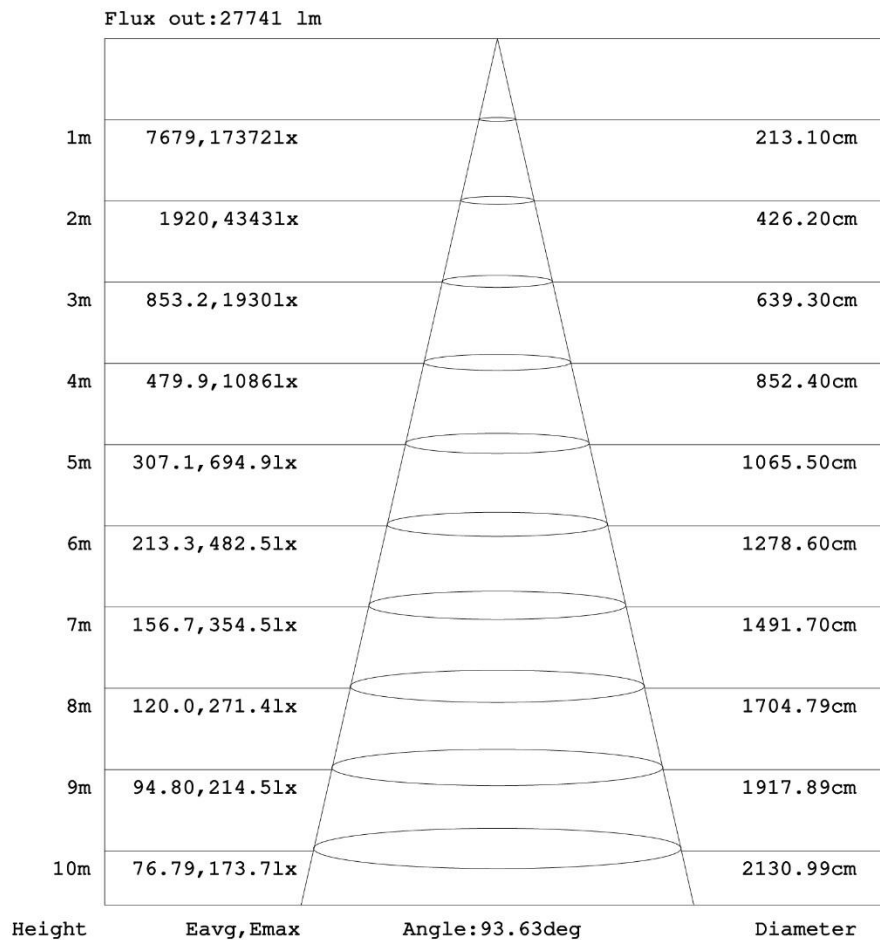


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:28.5DEG
 Operators:lishengchi
 Test Date:2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:55.0%
 Test Distance:11.340m [K=1.0000]
 Remarks:

AAI Figure

Test:U:230.1V I:0.8818A P:197.3W PF:0.9724 Freq:50.00Hz Lamp Flux:36672.8x1 lm		
NAME: UFOA00-200W-R090-C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:D 0.325	Shielding Angle:

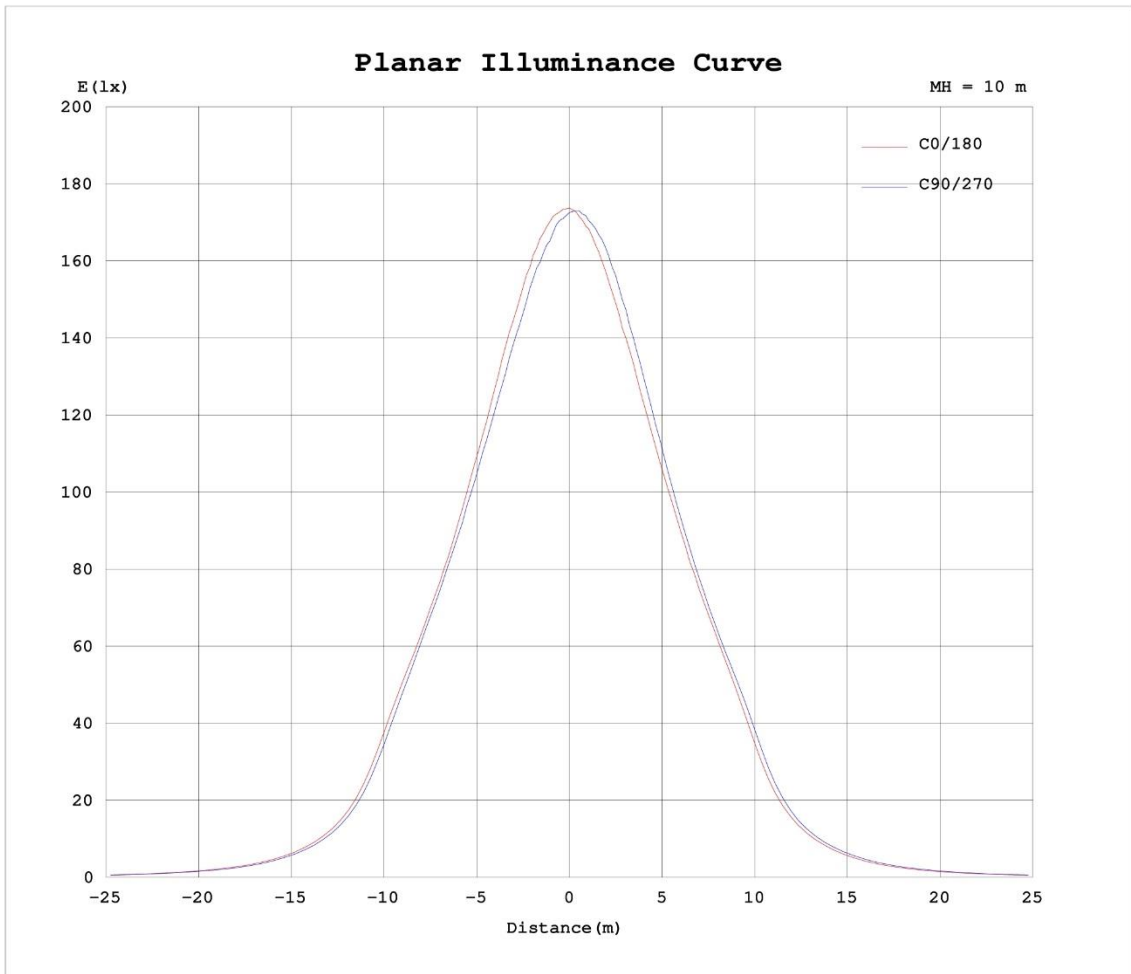


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:28.5DEG
 Operators:lishengchi
 Test Date:2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:55.0%
 Test Distance:11.340m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 28.5DEG
 Operators: lishengchi
 Test Date: 2018-12-04

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
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 Remarks: