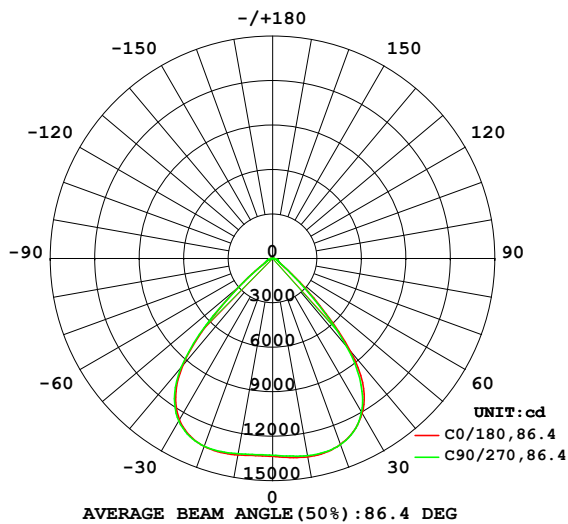


LUMINAIRE PHOTOMETRIC TEST REPORT

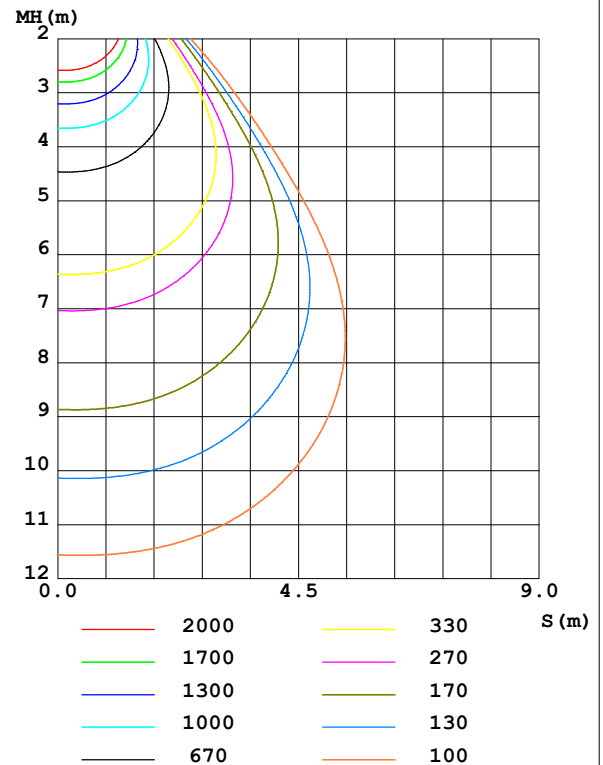
Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 163.88 lm/W
MODEL	SMD	Imax (cd)	13608	S/MH (C0/180)	1.28	
NOMINAL POWER(W)	150	LOR (%)	100.0	S/MH (C90/270)	1.29	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	23859	η UP,DN (C0-180)	0.0,47.3	
NOMINAL FLUX(lm)	23858.7	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,52.7	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	230	η down (%)	100.0	CIBSE SHR MAX	1.30	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-12-11

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [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	1359	1355	1351	1343	1346	1341	1338	1339	0- 10	1278	1278	5.36, 5.36
20	1336	1332	1337	1337	1350	1346	1349	1345	10- 20	3825	5103	21.4, 21.4
30	1208	1203	1200	1203	1256	1257	1267	1257	20- 30	5998	11101	46.5, 46.5
40	818.4	803.6	781.6	795.6	946.2	955.6	960.6	950.9	30- 40	6774	17875	74.9, 74.9
50	201.6	191.8	179.2	194.0	295.9	297.4	293.2	290.0	40- 50	4121	21996	92.2, 92.2
60	52.49	52.57	52.06	52.56	63.35	60.57	61.48	60.45	50- 60	1038	23034	96.5, 96.5
70	32.27	32.82	33.11	32.92	36.53	36.52	36.86	36.21	60- 70	435.8	23470	98.4, 98.4
80	17.06	17.19	16.18	17.60	23.31	23.99	23.29	22.66	70- 80	296.7	23766	99.6, 99.6
90	0.2083	0.2075	0.2066	0.2066	0.2394	0.2965	0.3251	0.2965	80- 90	92.36	23859	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:X10cd									UNIT: lm		

Conical surface Flux(90deg): 20494 lm

%lum = 85.9%

%lamp = 85.9%

Conical surface Flux(120deg): 23034 lm

%lum = 96.5%

%lamp = 96.5%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-12-11

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz

Lamp Flux:23858.7x1 lm

NAME: PA-150W

TYPE: 4000K

WEIGHT:

SPEC.:

DIM.:

SERIAL No.:

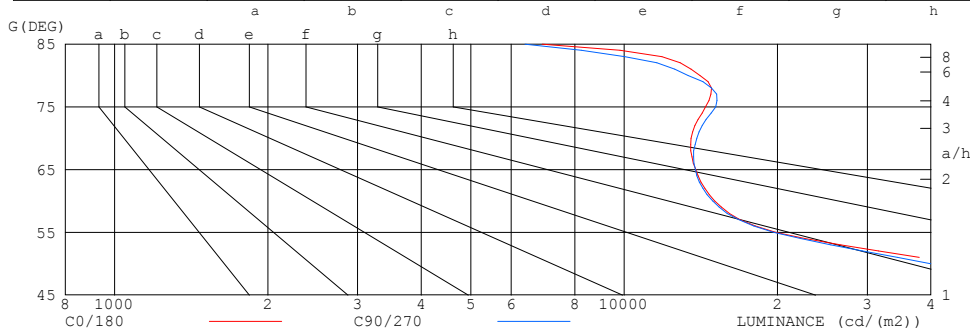
MFR.:

SUR.: 0.149m*0.149m*3.14

Shielding Angle:

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



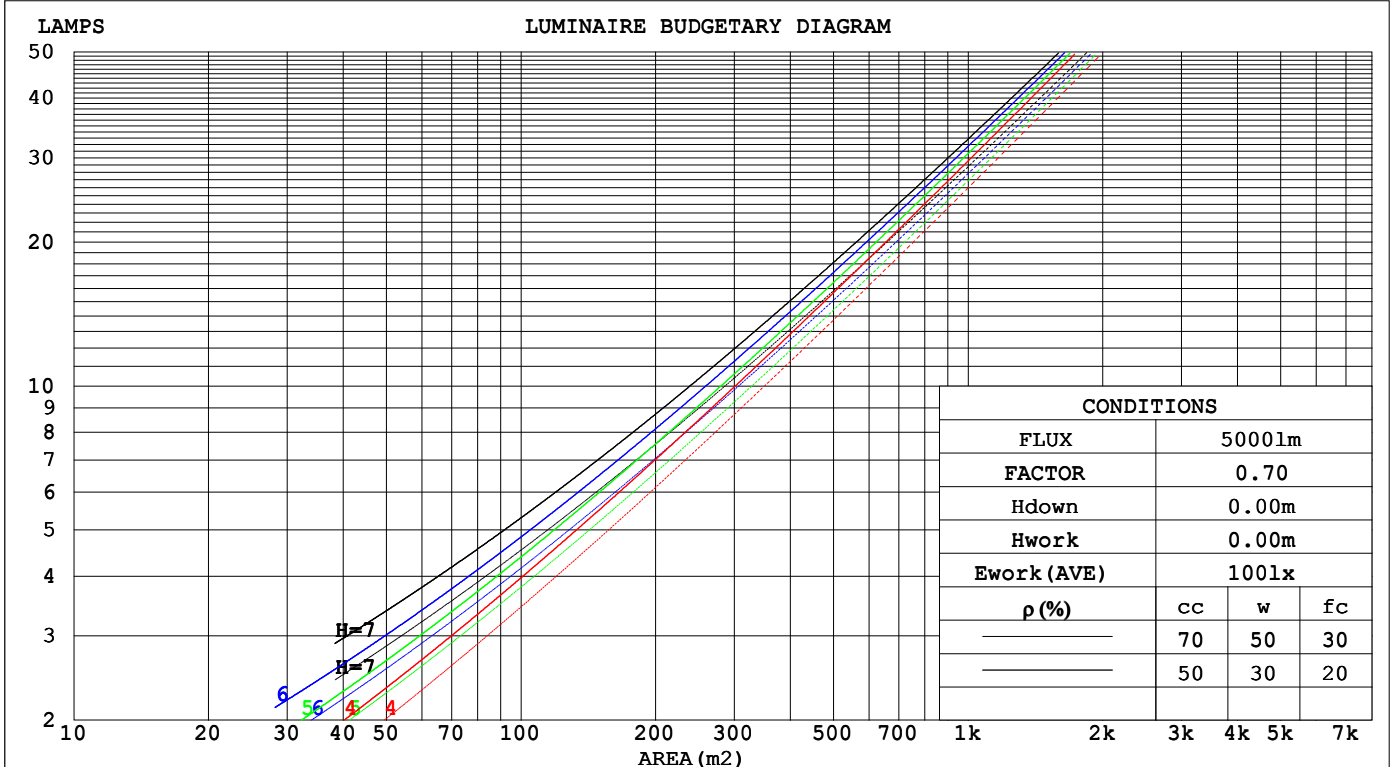
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.03	1.07	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.92	.91
2.0	.99	.94	.90	.97	.93	.89	.94	.90	.87	.91	.88	.85	.88	.85	.83	.81
3.0	.90	.84	.79	.89	.83	.79	.86	.81	.77	.84	.80	.76	.81	.78	.75	.73
4.0	.83	.76	.71	.81	.75	.70	.79	.74	.69	.77	.72	.69	.75	.71	.68	.66
5.0	.76	.69	.63	.75	.68	.63	.73	.67	.62	.71	.66	.62	.69	.65	.61	.60
6.0	.70	.62	.57	.69	.62	.57	.67	.61	.57	.66	.60	.56	.64	.59	.56	.54
7.0	.64	.57	.52	.63	.57	.52	.62	.56	.51	.61	.55	.51	.60	.55	.51	.49
8.0	.59	.52	.47	.59	.52	.47	.58	.51	.47	.56	.51	.47	.55	.50	.47	.45
9.0	.55	.48	.43	.55	.48	.43	.53	.47	.43	.52	.47	.43	.52	.46	.43	.41
10.0	.51	.44	.40	.51	.44	.40	.50	.44	.40	.49	.43	.39	.48	.43	.39	.38



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz																	
Lamp Flux:23858.7x1 lm																	
NAME: PA-150W						TYPE: 4000K						WEIGHT:					
SPEC.:						DIM.:						SERIAL No.:					
MFR.:						SUR.: 0.149m*0.149m*3.14						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	.217	.123	.039	.210	.120	.038	.197	.113	.036	.186	.107	.034	.175	.101	.033	
2.0	.209	.115	.035	.204	.112	.035	.193	.107	.033	.183	.102	.032	.173	.098	.031	
3.0	.200	.106	.032	.195	.104	.031	.185	.100	.030	.176	.097	.030	.168	.093	.029	
4.0	.190	.099	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027	
5.0	.180	.092	.027	.176	.091	.026	.169	.088	.026	.162	.086	.025	.156	.083	.025	
6.0	.171	.086	.025	.168	.085	.024	.161	.083	.024	.155	.081	.024	.150	.079	.023	
7.0	.163	.081	.023	.160	.080	.023	.154	.078	.022	.149	.076	.022	.143	.074	.022	
8.0	.155	.076	.021	.152	.075	.021	.147	.073	.021	.142	.072	.021	.137	.071	.021	
9.0	.148	.071	.020	.145	.071	.020	.141	.069	.020	.136	.068	.020	.132	.067	.019	
10.0	.141	.068	.019	.139	.067	.019	.134	.066	.019	.130	.065	.018	.127	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.161	.132	.108	.138	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.151	.114	.084	.129	.098	.073	.089	.068	.051	.051	.040	.030	.016	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.055	.116	.077	.048	.080	.054	.034	.046	.031	.020	.015	.010	.007	
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.017	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.100	.058	.028	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.111	.062	.028	.096	.054	.025	.066	.038	.018	.039	.022	.010	.013	.007	.003	
10.0	.106	.057	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm											
NAME: PA-150W					TYPE: 4000K			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.: 0.149m*0.149m*3.14			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		16.0	17.2	16.3	17.5	17.8	15.7	17.0	16.1	17.3	17.6
3H		17.5	18.6	17.9	18.9	19.2	17.4	18.4	17.7	18.8	19.1
4H		18.3	19.3	18.7	19.6	20.0	18.2	19.2	18.6	19.5	19.9
6H		18.9	19.8	19.3	20.2	20.6	18.8	19.8	19.3	20.1	20.5
8H		19.1	20.0	19.5	20.4	20.8	19.0	19.9	19.4	20.3	20.7
12H		19.2	20.0	19.6	20.4	20.8	19.0	19.9	19.5	20.2	20.7
4H 2H		16.4	17.4	16.8	17.7	18.1	16.2	17.2	16.6	17.6	17.9
3H		18.2	19.0	18.6	19.4	19.8	18.1	18.9	18.5	19.3	19.7
4H		19.2	19.9	19.6	20.3	20.8	19.1	19.8	19.6	20.3	20.7
6H		20.0	20.6	20.5	21.1	21.6	19.9	20.5	20.4	21.0	21.5
8H		20.2	20.8	20.7	21.3	21.7	20.1	20.7	20.6	21.1	21.6
12H		20.3	20.8	20.8	21.3	21.8	20.1	20.7	20.6	21.1	21.6
8H 4H		19.6	20.1	20.0	20.6	21.1	19.5	20.1	20.0	20.5	21.0
6H		20.5	21.0	21.0	21.5	22.0	20.4	20.9	20.9	21.4	21.9
8H		20.8	21.2	21.3	21.8	22.2	20.6	21.1	21.2	21.6	22.1
12H		20.9	21.3	21.4	21.8	22.4	20.7	21.1	21.2	21.6	22.2
12H 4H		19.6	20.1	20.1	20.6	21.1	19.5	20.0	20.0	20.5	21.0
6H		20.6	21.0	21.1	21.5	22.0	20.5	20.9	21.0	21.4	21.9
8H		20.9	21.3	21.4	21.8	22.3	20.8	21.1	21.3	21.6	22.2
CIE190: 2010											

CIE190: 2010
Area: 0.0697111 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

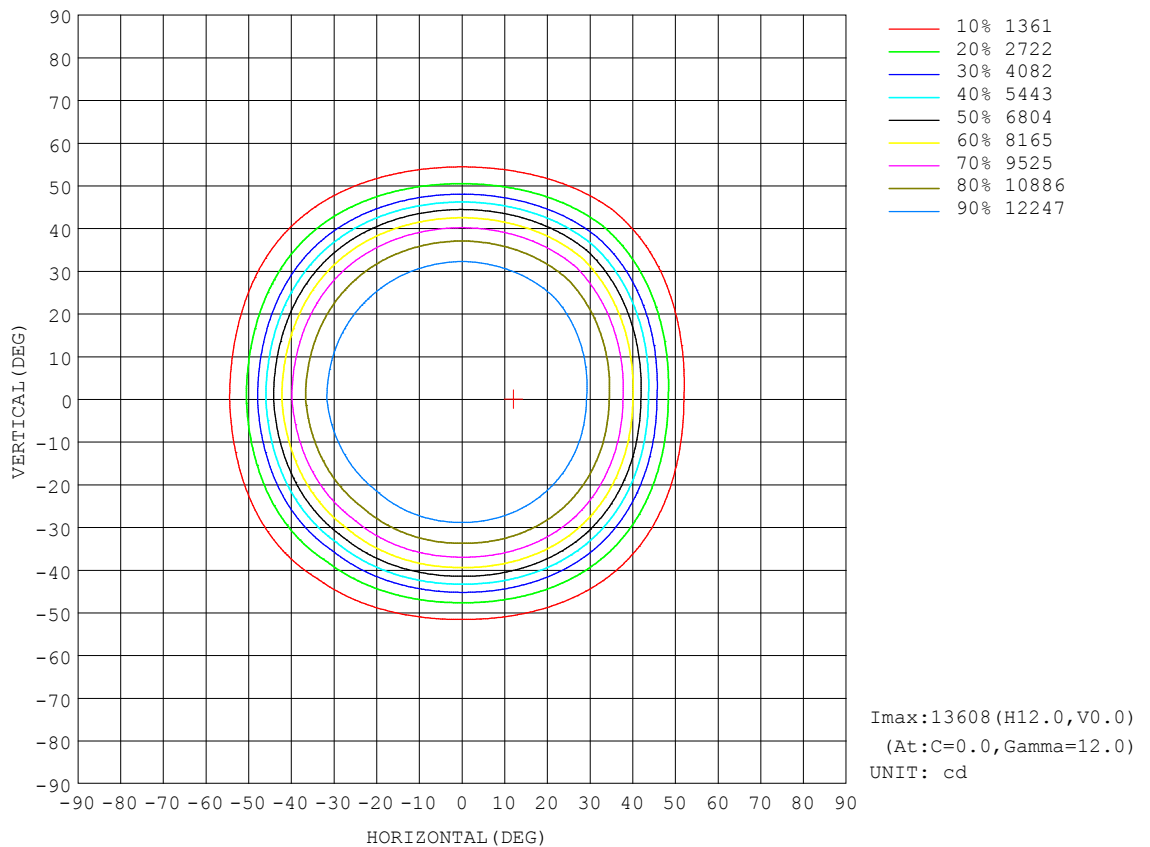
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	67	62	75	67	62	74	67	62	57
0.80	85	77	72	84	77	72	83	76	71	66
1.00	92	84	79	91	84	79	89	84	78	73
1.25	97	90	85	96	89	85	94	88	84	79
1.50	100	94	90	99	93	89	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	111	108	105	109	106	103	106	103	101	93
5.00	113	110	107	111	108	106	107	104	103	95
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: 25.1℃
Operators:
Test Date: 2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

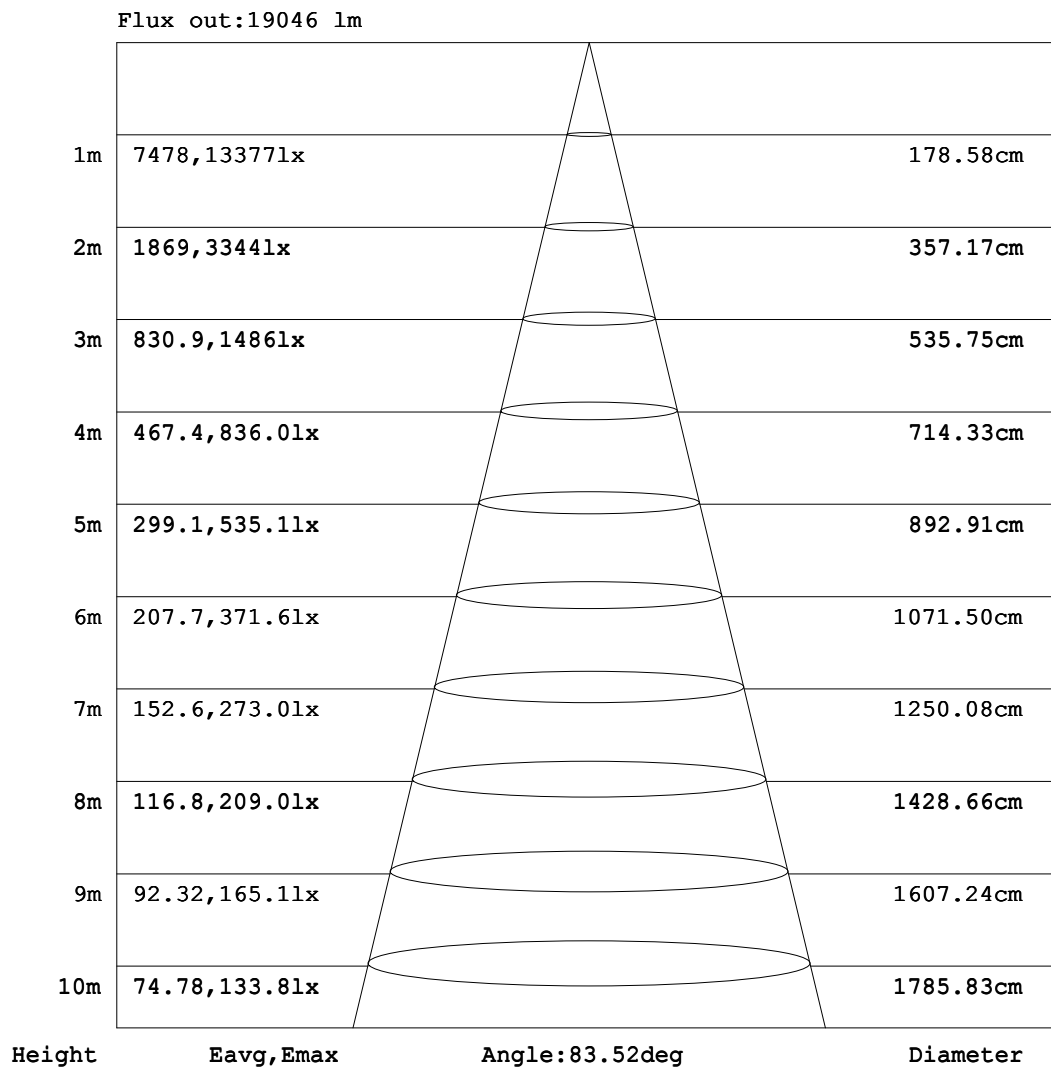


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



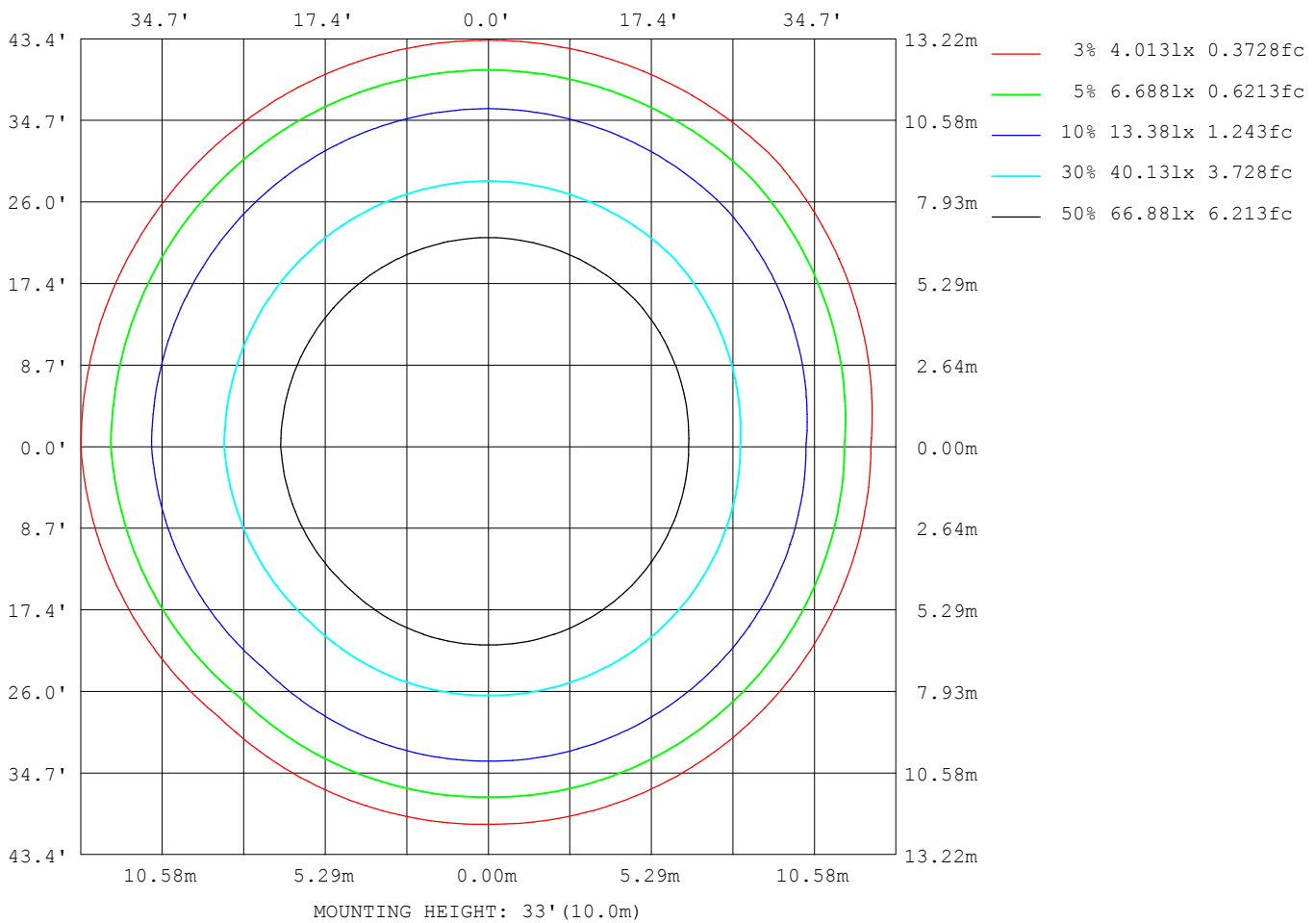
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1°C
Operators:
Test Date: 2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.28V I:0.6454A P:145.59W PF:0.9795 Freq:50.01Hz Lamp Flux:23858.7x1 lm		
NAME: PA-150W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

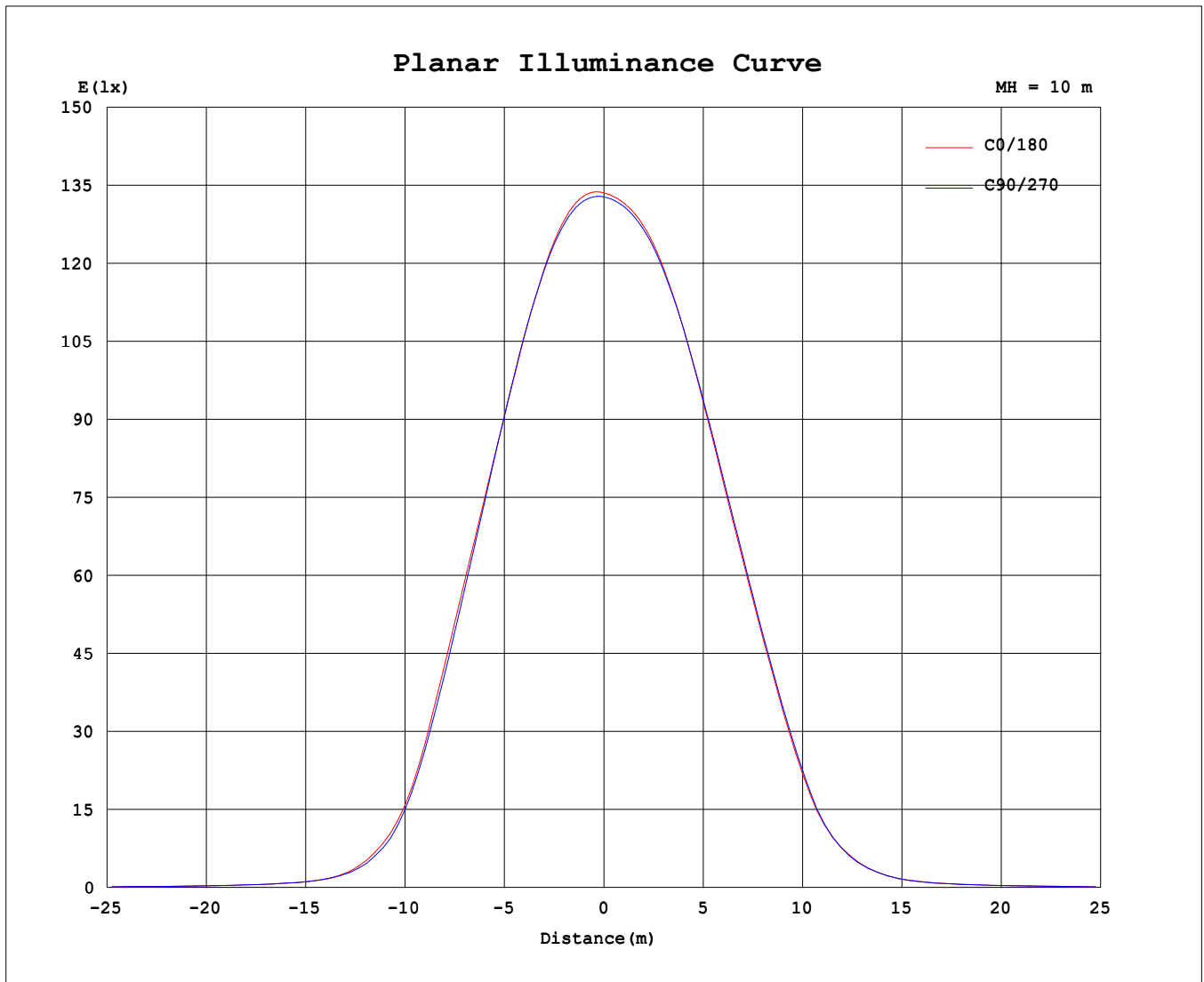
AvgL	cd/m2
L_0~180 (65) av	14738
L_0~180 (75) av	15423
L_0~180 (85) av	12711
L_90~270 (65) av	14715
L_90~270 (75) av	15961
L_90~270 (85) av	12448
L_45 (65) av	14613
L_45 (75) av	15789
L_45 (85) av	12660

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-12-11

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity: 50.0%
Test Distance: 10.026m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

```