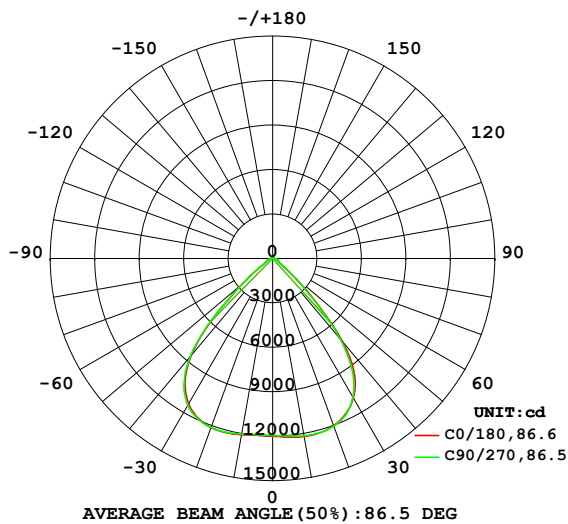


LUMINAIRE PHOTOMETRIC TEST REPORT

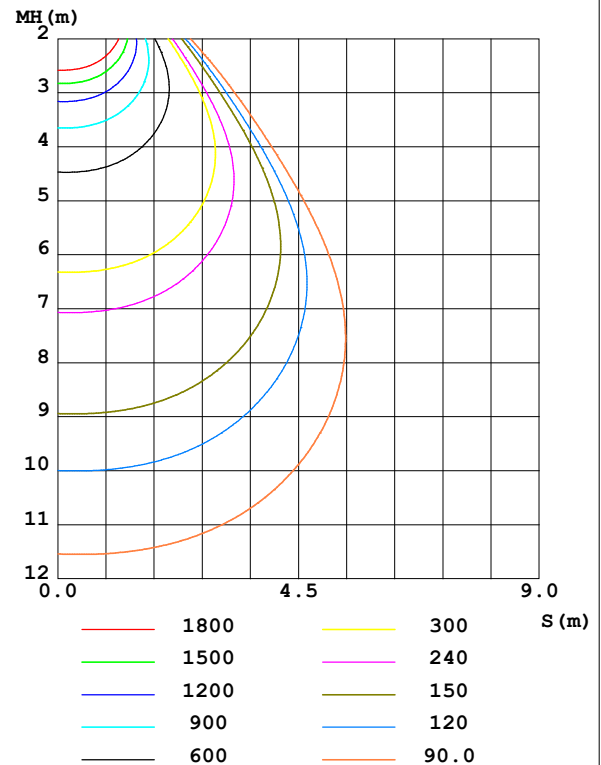
Test:U:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 143.22 lm/W
MODEL	SMD	Imax (cd)	12216	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	150	LOR (%)	100.0	S/MH (C90/270)	1.30	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	21531	η UP,DN (C0-180)	0.0,47.3	
NOMINAL FLUX(lm)	21531	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	1220	1217	1215	1209	1208	1205	1204	1206	0- 10	1149	1149	5.34, 5.34
20	1202	1199	1205	1205	1215	1213	1215	1211	10- 20	3441	4590	21.3, 21.3
30	1089	1086	1083	1088	1134	1136	1144	1134	20- 30	5407	9997	46.4, 46.4
40	738.0	728.2	709.5	723.4	856.8	865.3	868.9	860.2	30- 40	6124	16121	74.9, 74.9
50	181.9	174.2	162.2	176.3	269.8	270.5	264.7	263.1	40- 50	3735	19856	92.2, 92.2
60	46.79	46.59	46.50	46.44	56.79	54.24	54.96	54.06	50- 60	938.0	20794	96.6, 96.6
70	29.07	29.18	29.65	29.44	32.78	32.64	32.94	32.38	60- 70	389.2	21183	98.4, 98.4
80	15.23	15.11	14.46	15.83	20.94	21.38	20.90	20.34	70- 80	266.0	21449	99.6, 99.6
90	0.1831	0.1848	0.1840	0.1831	0.2092	0.2654	0.2898	0.2705	80- 90	81.99	21531	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): 18494 lm

%lum = 85.9%

%lamp = 85.9%

Conical surface Flux(120deg): 20794 lm

%lum = 96.6%

%lamp = 96.6%

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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz

Lamp Flux:21531x1 lm

NAME: PA-150W

TYPE: 3000K

WEIGHT:

SPEC.:

DIM.:

SERIAL No.:

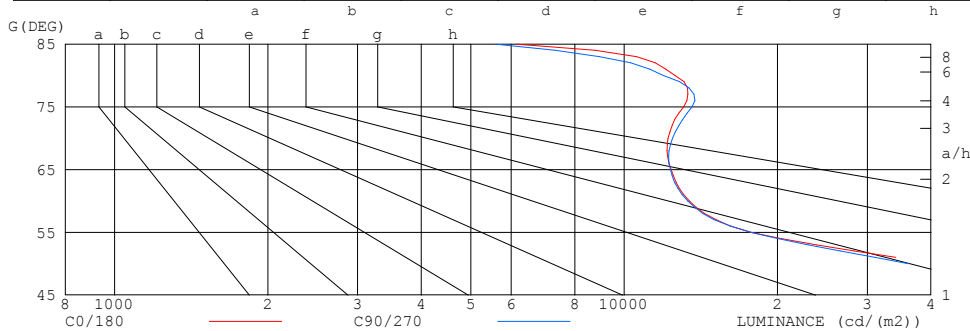
MFR.:

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



LUMINANCE cd/(m2)

G (DEG)	C0/180	C90/270
85	6148	5597
80	12582	11945
75	13084	13590
70	12193	12434
65	12373	12333
60	13425	13341
55	17745	17767
50	40583	36192
45	82491	78189

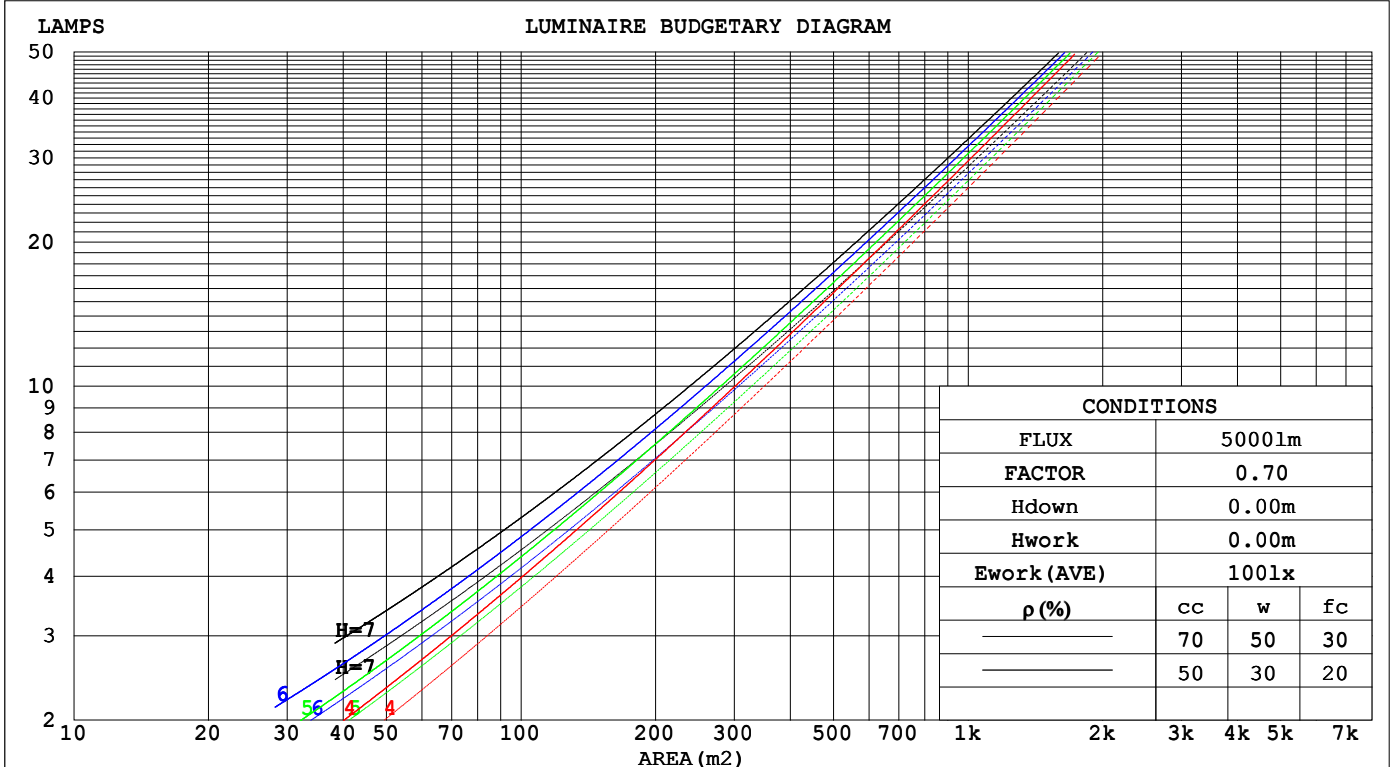
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	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	.59	.55	.51	.49
8.0	.59	.52	.47	.59	.52	.47	.57	.51	.47	.56	.51	.47	.55	.50	.46	.45
9.0	.55	.48	.43	.54	.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
 γ 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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz		
Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	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	.031	.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	.075	.022		
8.0	.155	.076	.021	.152	.075	.021	.147	.073	.021	.142	.072	.021	.138	.071	.021		
9.0	.148	.071	.020	.145	.071	.020	.141	.070	.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	.107	.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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm											
NAME: PA-150W					TYPE: 3000K			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		15.6	16.8	15.9	17.1	17.4	15.3	16.5	15.7	16.9	17.2
3H		17.1	18.1	17.4	18.5	18.8	16.9	18.0	17.3	18.3	18.7
4H		17.8	18.8	18.3	19.2	19.6	17.8	18.8	18.2	19.1	19.5
6H		18.5	19.4	18.9	19.8	20.2	18.4	19.4	18.9	19.7	20.1
8H		18.7	19.6	19.1	20.0	20.4	18.6	19.5	19.0	19.9	20.3
12H		18.8	19.6	19.2	20.0	20.4	18.6	19.4	19.1	19.8	20.3
4H 2H		16.0	17.0	16.4	17.3	17.7	15.8	16.8	16.2	17.1	17.5
3H		17.8	18.6	18.2	19.0	19.4	17.7	18.5	18.1	18.9	19.3
4H		18.8	19.5	19.2	19.9	20.4	18.7	19.4	19.2	19.9	20.3
6H		19.6	20.2	20.1	20.7	21.1	19.5	20.1	20.0	20.6	21.1
8H		19.8	20.4	20.3	20.8	21.3	19.7	20.3	20.2	20.7	21.2
12H		19.9	20.4	20.4	20.9	21.4	19.7	20.3	20.2	20.7	21.2
8H 4H		19.1	19.7	19.6	20.2	20.6	19.1	19.7	19.6	20.1	20.6
6H		20.1	20.6	20.6	21.1	21.5	20.0	20.5	20.5	21.0	21.5
8H		20.4	20.8	20.9	21.3	21.8	20.3	20.7	20.8	21.2	21.7
12H		20.5	20.9	21.0	21.4	21.9	20.3	20.7	20.8	21.2	21.8
12H 4H		19.2	19.7	19.6	20.2	20.6	19.1	19.6	19.6	20.1	20.6
6H		20.1	20.6	20.7	21.0	21.6	20.1	20.5	20.6	21.0	21.5
8H		20.4	20.8	21.0	21.3	21.9	20.4	20.7	20.9	21.2	21.8
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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

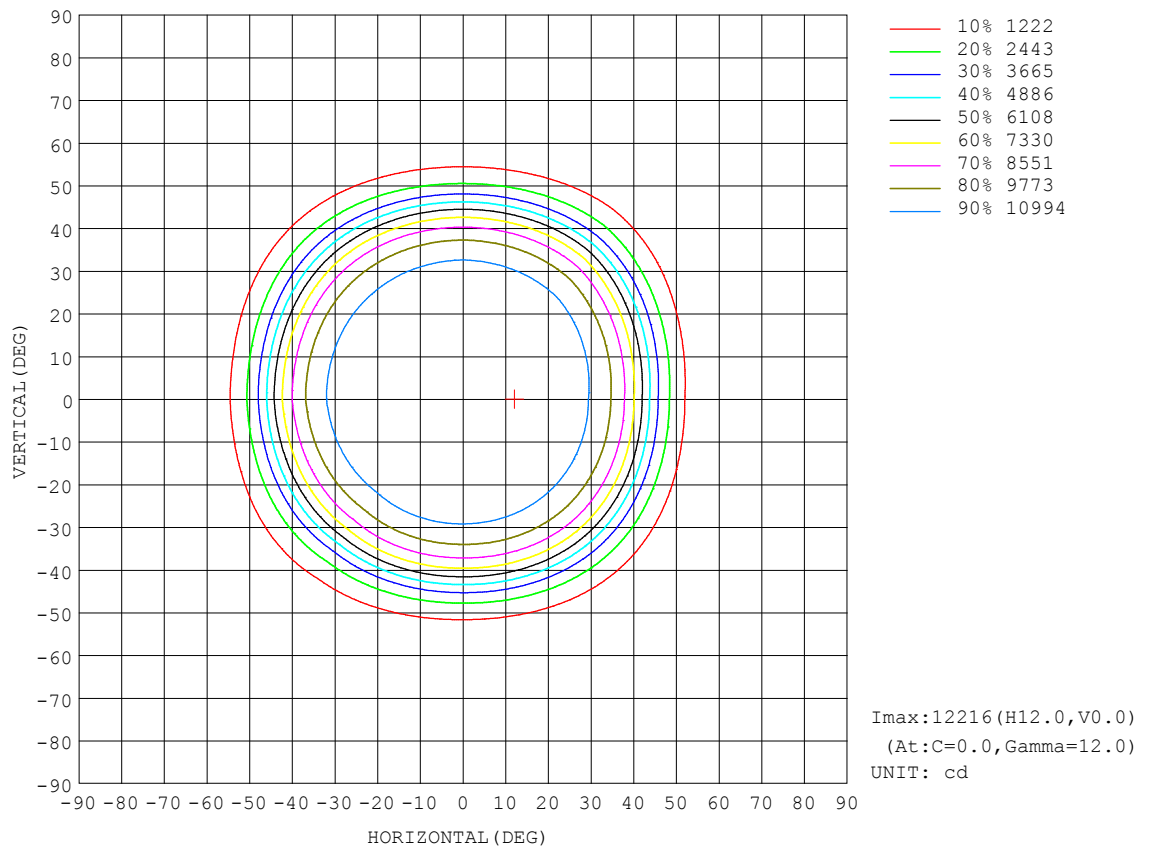
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	67	62	75	67	62	74	67	62	57
0.80	85	77	72	84	76	72	83	76	71	66
1.00	91	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	94
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°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:

ISOCANDELA DIAGRAM

Test:U:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

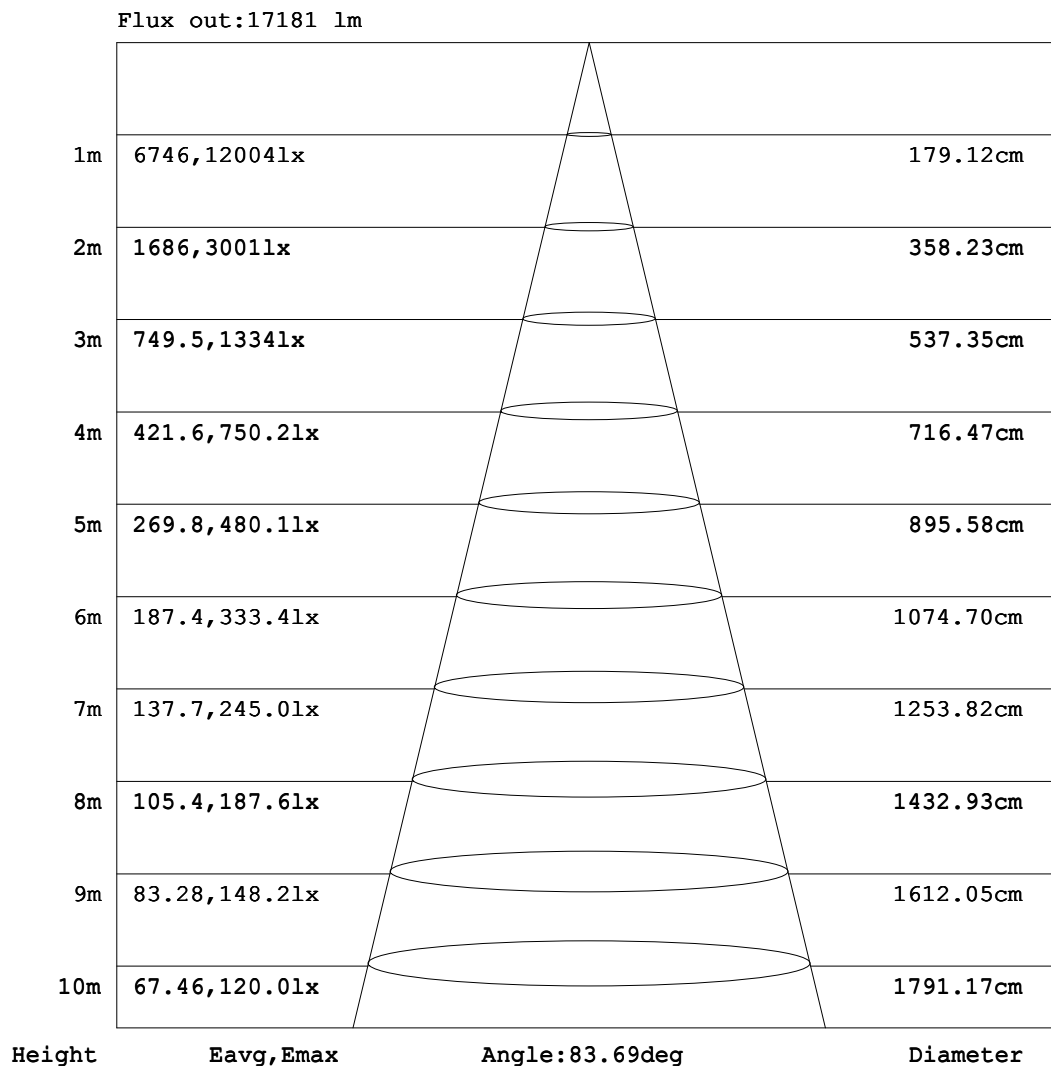


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-11

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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



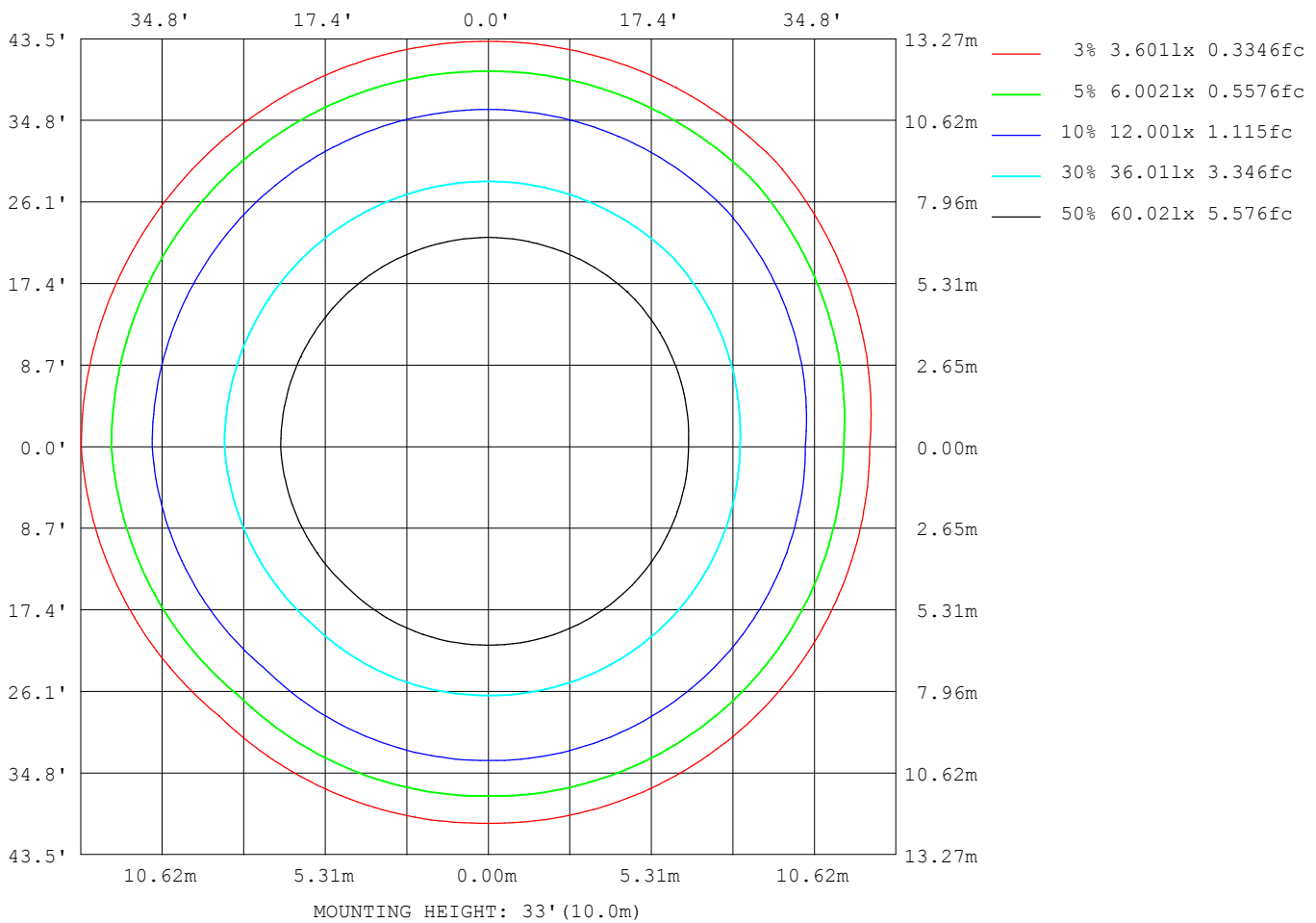
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	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:230.45V I:0.6652A P:150.34W PF:0.9807 Freq:50.01Hz Lamp Flux:21531x1 lm		
NAME: PA-150W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

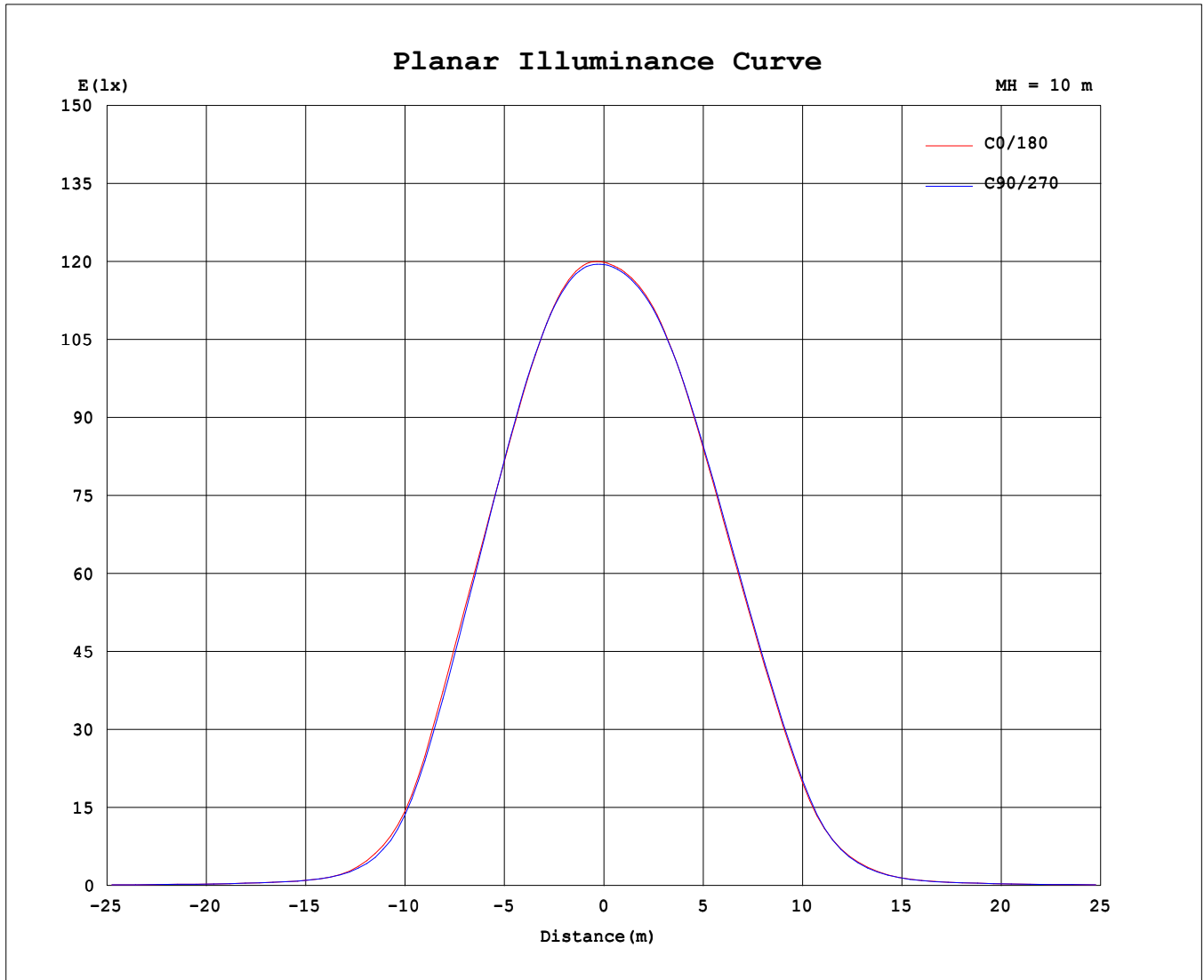
AvgL	cd/m2
L_0~180 (65) av	13192
L_0~180 (75) av	13926
L_0~180 (85) av	11226
L_90~270 (65) av	13147
L_90~270 (75) av	14333
L_90~270 (85) av	10938
L_45 (65) av	13047
L_45 (75) av	14105
L_45 (85) av	11210

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:

```