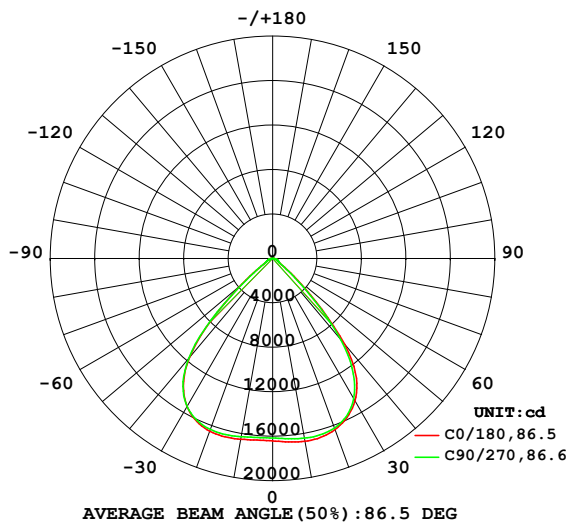


LUMINAIRE PHOTOMETRIC TEST REPORT

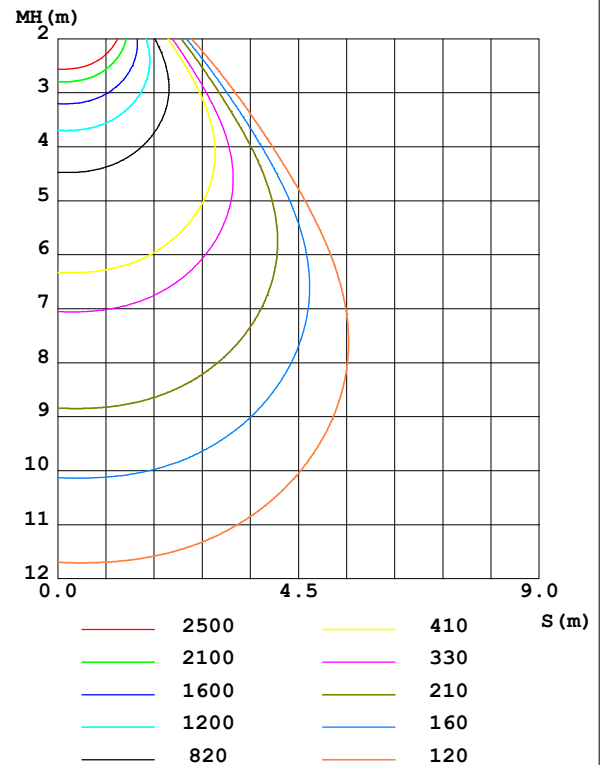
Test:U:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 144.15 lm/W
MODEL	SMD	I _{max} (cd)	16715	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	200	LOR (%)	100.0	S/MH (C90/270)	1.30	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	29139	η UP,DN (C0-180)	0.0,47.3	
NOMINAL FLUX(lm)	29139.4	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: 2024-12-10

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	1670	1657	1642	1628	1652	1637	1628	1625	0- 10	1560	1560	5.35, 5.35
20	1639	1628	1624	1617	1654	1641	1638	1629	10- 20	4661	6221	21.3, 21.3
30	1481	1471	1459	1457	1539	1533	1539	1523	20- 30	7303	13524	46.4, 46.4
40	1008	985.0	957.1	971.1	1165	1172	1175	1159	30- 40	8269	21793	74.8, 74.8
50	251.9	235.9	225.7	238.1	365.9	366.6	363.3	358.0	40- 50	5076	26869	92.2, 92.2
60	63.75	63.38	62.60	62.95	77.47	73.33	74.24	72.40	50- 60	1275	28144	96.6, 96.6
70	38.88	39.88	39.78	39.66	44.32	44.14	44.43	43.31	60- 70	526.3	28670	98.4, 98.4
80	20.71	20.90	19.34	20.96	28.36	29.30	28.08	27.23	70- 80	357.9	29028	99.6, 99.6
90	0.2495	0.2512	0.2461	0.2436	0.2923	0.3570	0.3990	0.3494	80- 90	111.3	29139	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): 25013 lm

%lum = 85.8%

%lamp = 85.8%

Conical surface Flux(120deg): 28144 lm

%lum = 96.6%

%lamp = 96.6%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.1℃
 Operators:
 Test Date: 2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz
Lamp Flux:29139.4x1 lm

NAME: PA-200W

TYPE: 4000K

WEIGHT:

SPEC.:

DIM.:

SERIAL No.:

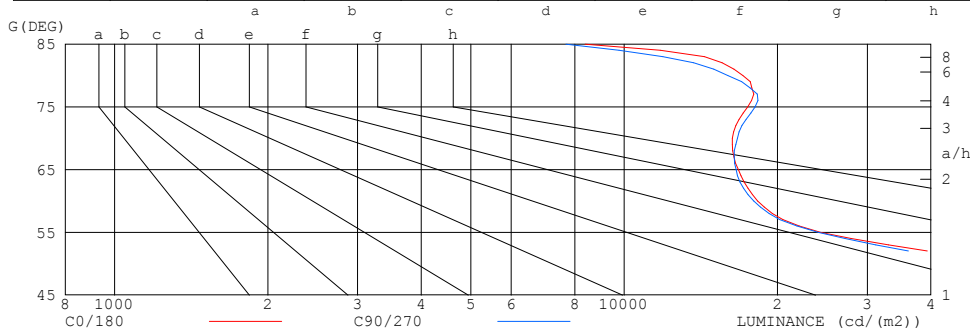
MFR.:

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



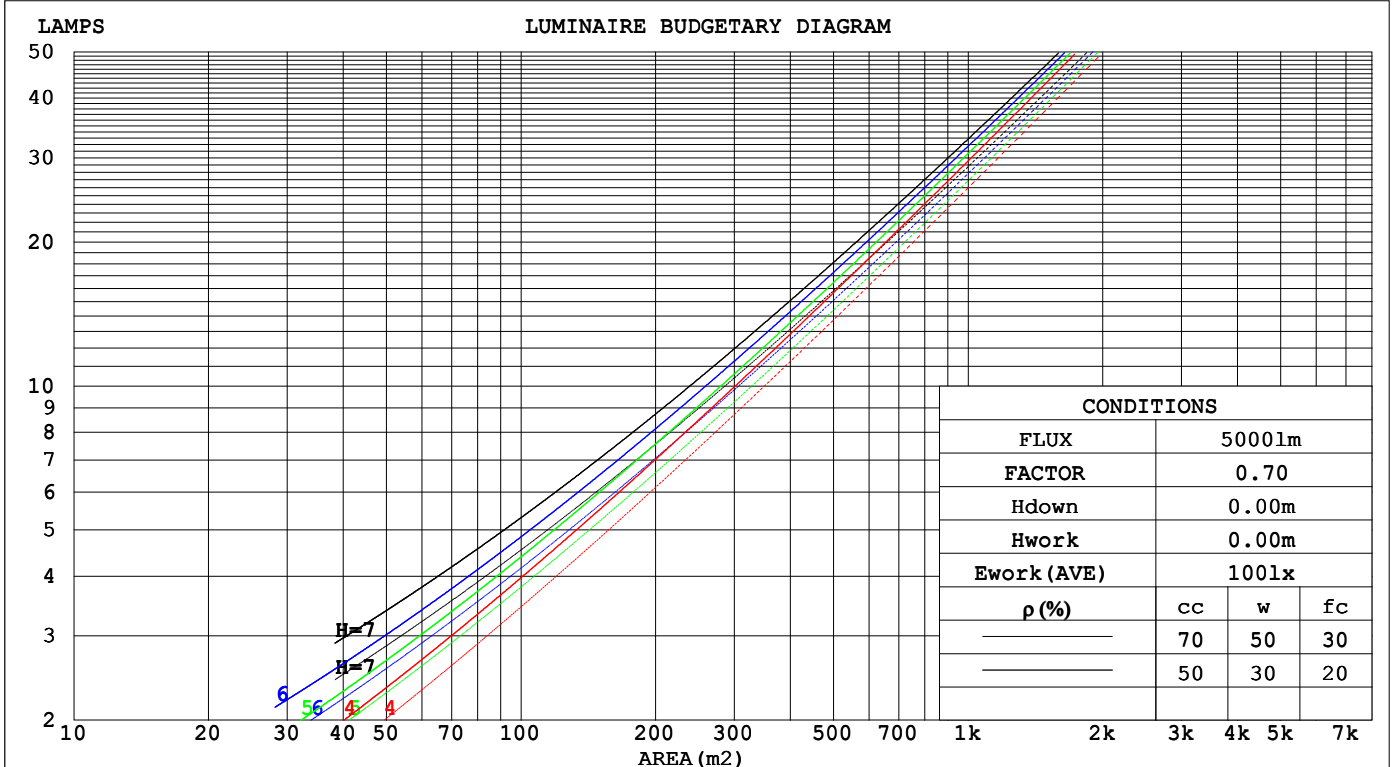
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1℃
Operators:
Test Date: 2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	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	.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:2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm																	
NAME: PA-200W						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	.031	.176	.097	.030	.168	.093	.029		
4.0	.190	.099	.029	.186	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027		
5.0	.180	.092	.027	.177	.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	.074	.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	.047	.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:2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm											
NAME: PA-200W					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		16.6	17.8	17.0	18.2	18.5	16.3	17.6	16.7	17.9	18.2
3H		18.1	19.2	18.5	19.5	19.9	17.9	19.0	18.3	19.4	19.7
4H		18.9	19.9	19.3	20.2	20.6	18.8	19.8	19.2	20.1	20.5
6H		19.6	20.5	20.0	20.9	21.3	19.4	20.3	19.8	20.7	21.1
8H		19.8	20.6	20.2	21.0	21.4	19.6	20.4	20.0	20.8	21.2
12H		19.8	20.6	20.2	21.0	21.4	19.6	20.4	20.0	20.8	21.2
4H 2H		17.0	18.0	17.4	18.4	18.8	16.8	17.8	17.2	18.2	18.5
3H		18.8	19.6	19.3	20.1	20.5	18.7	19.5	19.1	19.9	20.3
4H		19.8	20.6	20.3	21.0	21.4	19.7	20.4	20.1	20.8	21.3
6H		20.7	21.3	21.1	21.7	22.2	20.5	21.1	21.0	21.6	22.0
8H		20.9	21.5	21.4	21.9	22.4	20.7	21.2	21.1	21.7	22.2
12H		21.0	21.5	21.5	22.0	22.4	20.7	21.2	21.2	21.7	22.2
8H 4H		20.2	20.8	20.7	21.2	21.7	20.1	20.6	20.5	21.1	21.6
6H		21.2	21.7	21.7	22.2	22.6	21.0	21.4	21.5	21.9	22.4
8H		21.5	21.9	22.0	22.4	22.9	21.2	21.6	21.7	22.1	22.6
12H		21.6	22.0	22.1	22.5	23.0	21.3	21.6	21.8	22.1	22.7
12H 4H		20.2	20.7	20.7	21.2	21.7	20.1	20.6	20.6	21.1	21.6
6H		21.2	21.7	21.8	22.1	22.7	21.0	21.5	21.6	21.9	22.5
8H		21.5	21.9	22.1	22.4	23.0	21.3	21.7	21.8	22.2	22.8
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:2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

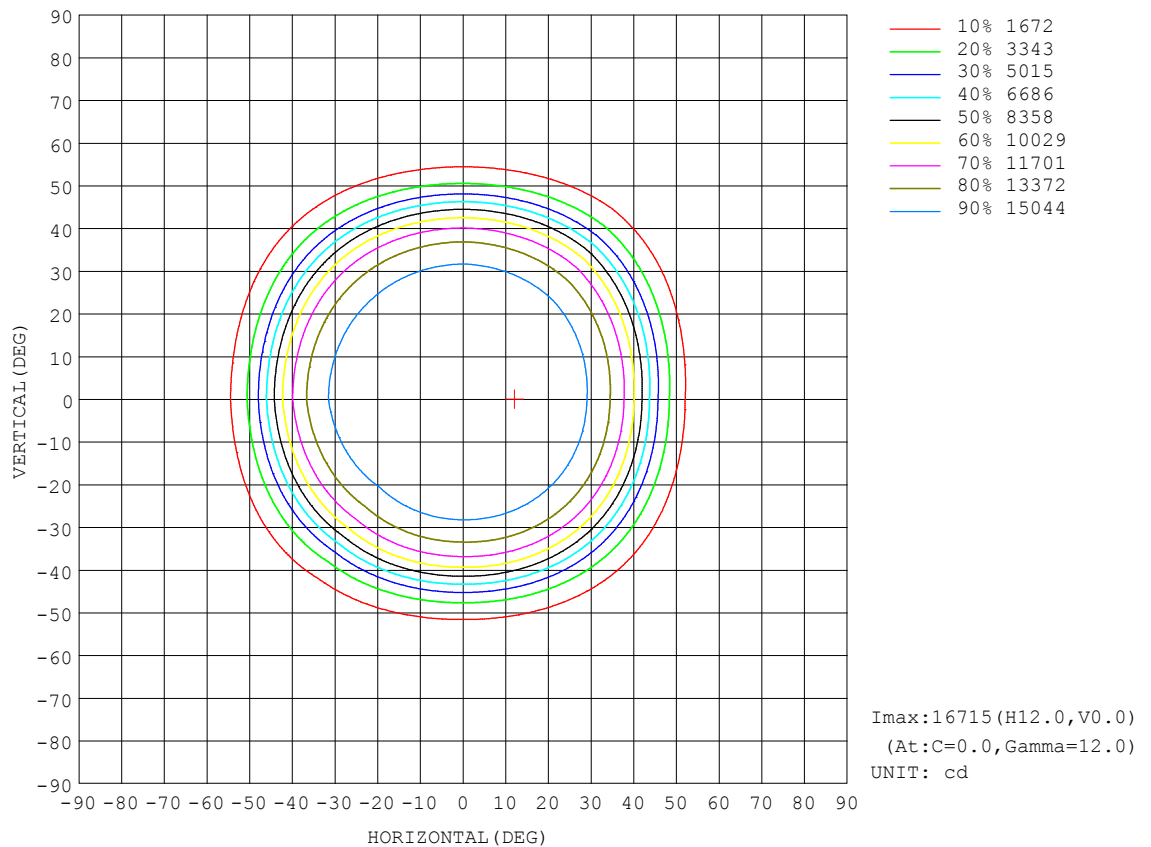
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	67	62	75	67	62	74	67	62	57
0.80	85	77	72	84	76	72	83	76	71	66
1.00	91	84	79	90	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℃
Operators:
Test Date: 2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

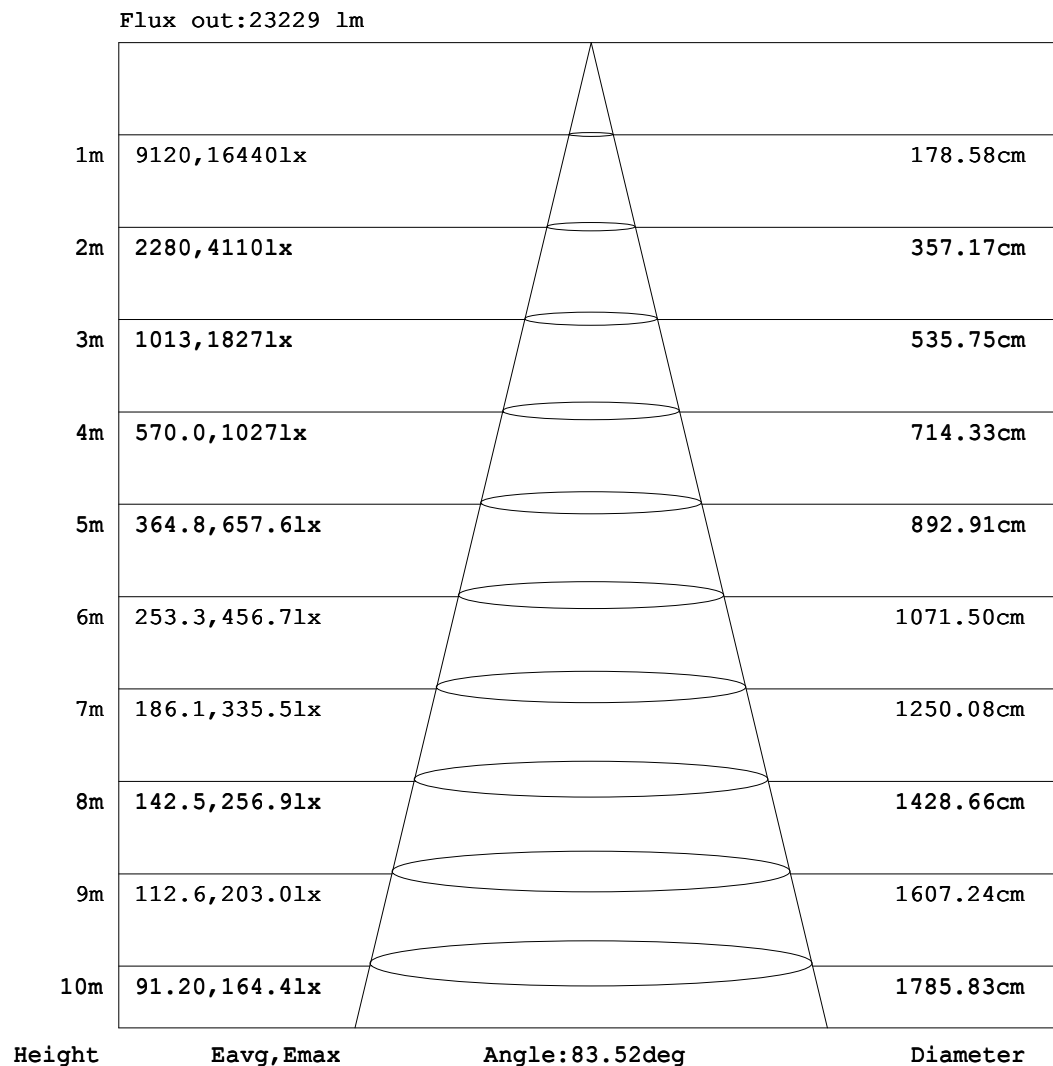


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



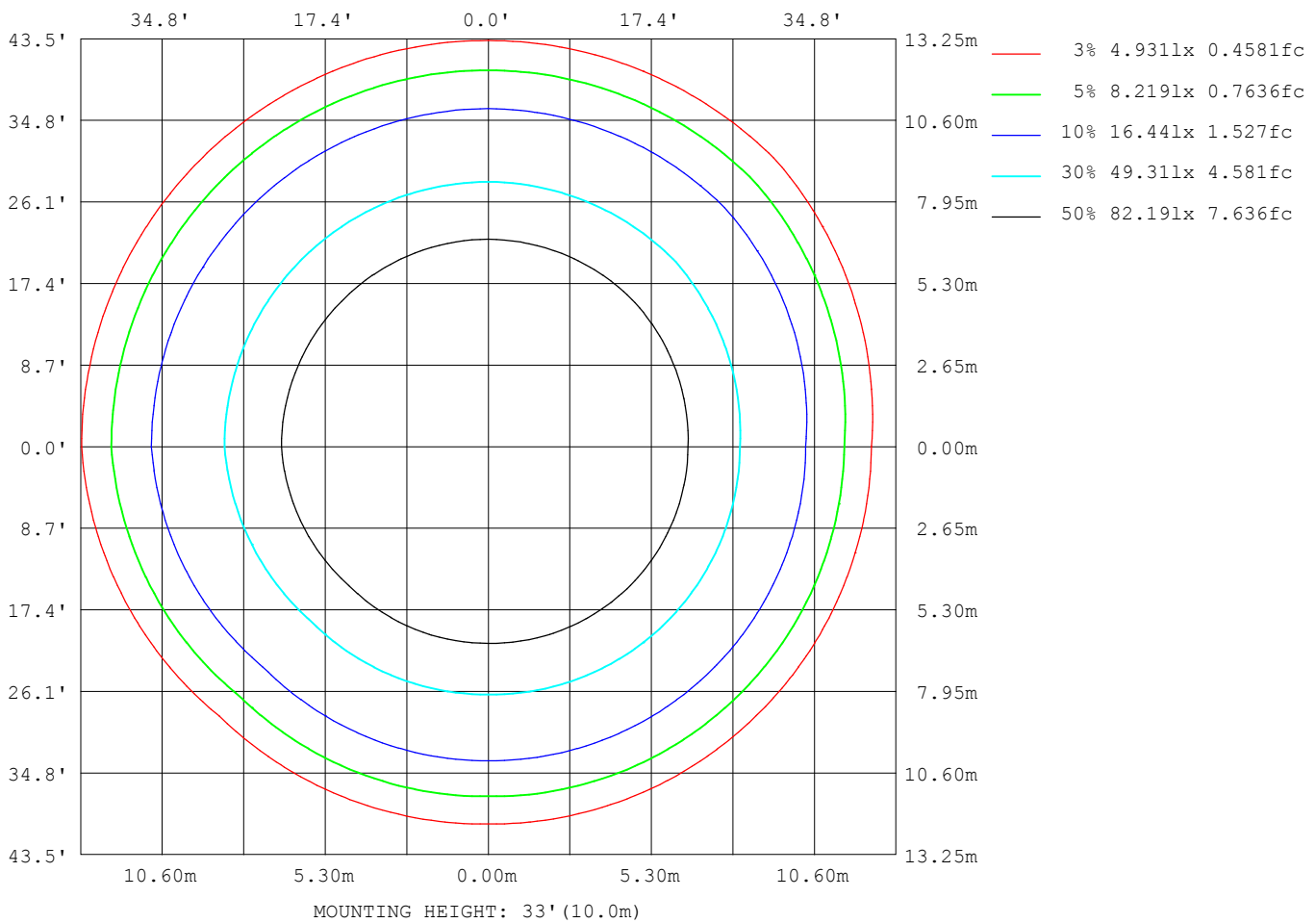
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	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:2024-12-10

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:230.49V I:0.8873A P:202.14W PF:0.9884 Freq:50.01Hz Lamp Flux:29139.4x1 lm		
NAME: PA-200W	TYPE: 4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

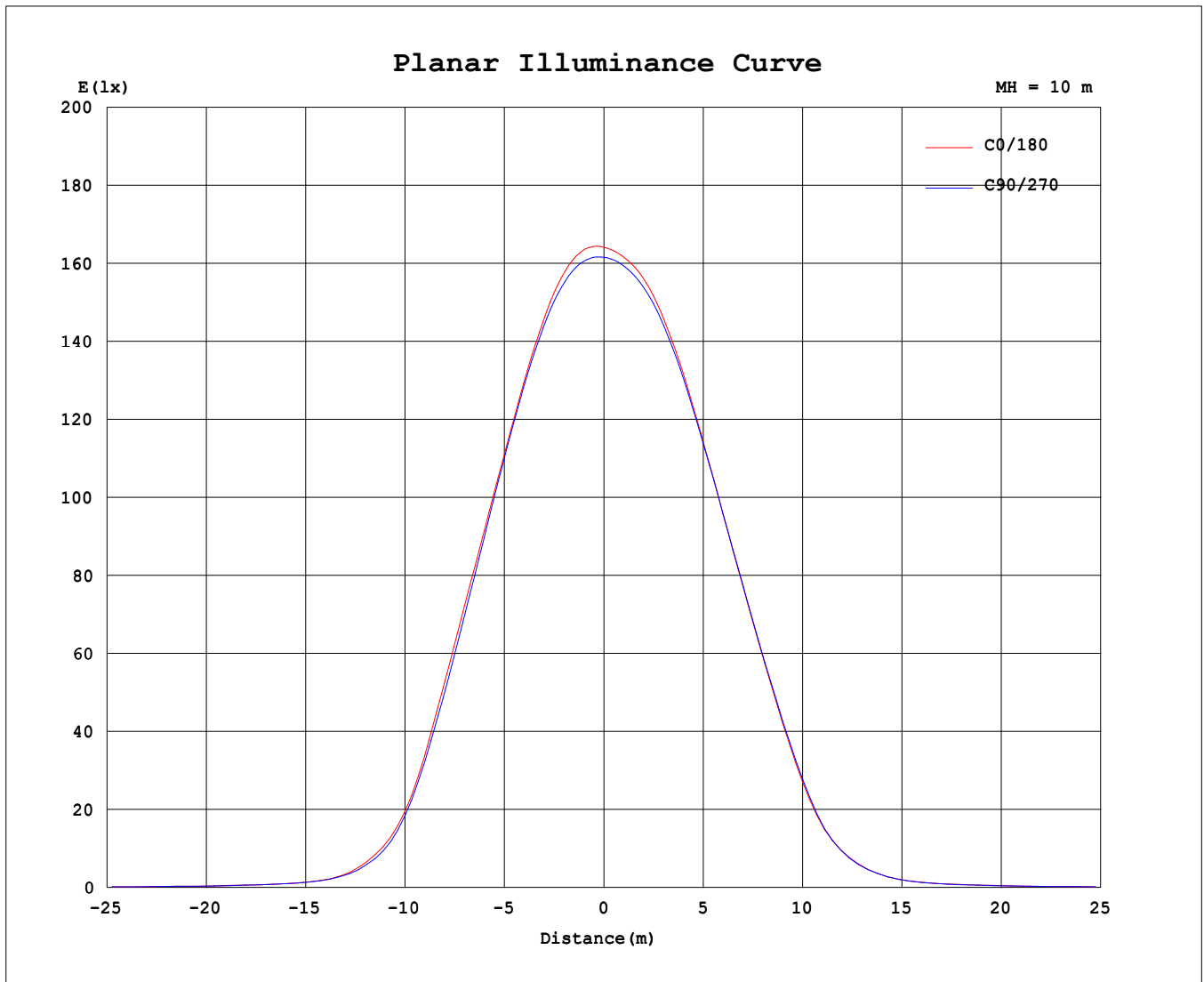
AvgL	cd/m2
L_0~180 (65) av	17944
L_0~180 (75) av	18695
L_0~180 (85) av	15519
L_90~270 (65) av	17748
L_90~270 (75) av	19155
L_90~270 (85) av	15068
L_45 (65) av	17601
L_45 (75) av	19054
L_45 (85) av	15088

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1℃
Operators:
Test Date:2024-12-10

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: 2024-12-10

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:

```

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