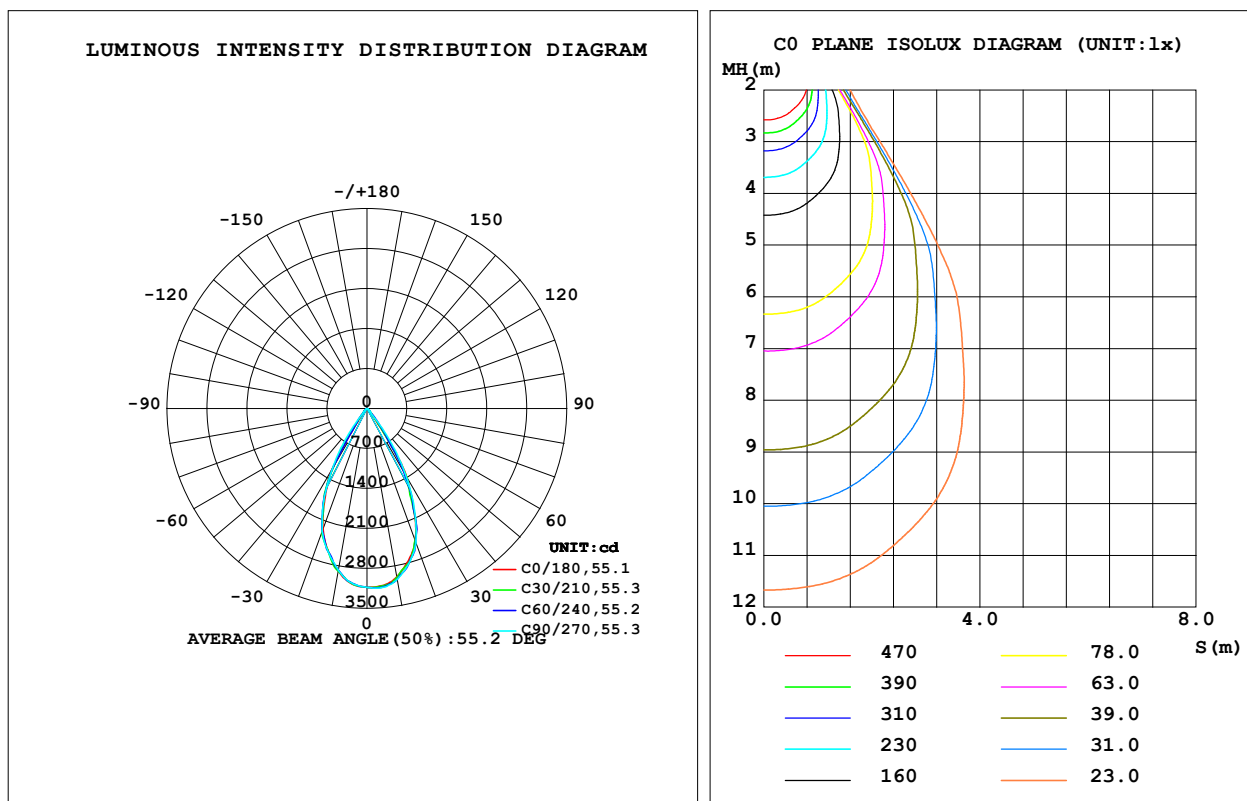


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: LPA-DR-A074-COI	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 64.09 lm/W			
MODEL	CXA 1830 9335 900MA	I _{max} (cd)	3149	S/MH(C0/180)	0.82
NOMINAL POWER(W)	36	LOR(%)	80.8	S/MH(C90/270)	0.82
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	2356.3	η UP,DN(C0-180)	0.0,41.9
NOMINAL FLUX(lm)	2915	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,39.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	80.8	CIBSE SHR MAX	0.85



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

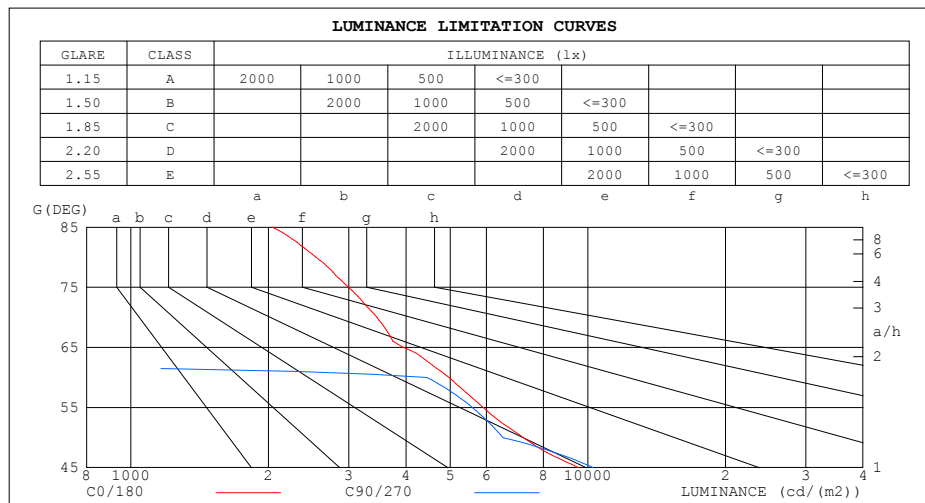
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2998	3023	3042	2974	2891	2886	2880	2924	0~ 10	291.4	291.4	12.4,10
20	2472	2478	2513	2422	2253	2293	2296	2306	10~ 20	753.9	1045	44.4,35.9
30	1390	1296	1384	1324	1213	1177	1204	1144	20~ 30	843.2	1888	80.1,64.8
40	150.9	143.4	128.9	143.5	128.9	137.7	119.4	125.4	30~ 40	351.0	2239	95,76.8
50	57.86	54.30	52.25	50.93	50.81	49.05	48.25	50.42	40~ 50	66.02	2305	97.8,79.1
60	30.95	27.87	27.69	27.71	25.89	25.80	24.52	25.71	50~ 60	34.45	2340	99.3,80.3
70	14.73	0	0	0	11.77	0	0	0	60~ 70	13.11	2353	99.9,80.7
80	5.497	0	0	0	3.844	0	0	0	70~ 80	2.983	2356	100,80.8
90	0.1618	0	0	0	0.0275	0	0	0	80~ 90	0.2853	2356	100,80.8
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		

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

LUMINANCE LIMITATION CURVES

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2035	0
80	2540	0
75	2996	0
70	3455	0
65	3946	0
60	4966	4444
55	5903	5591
50	7222	6522
45	9550	10274

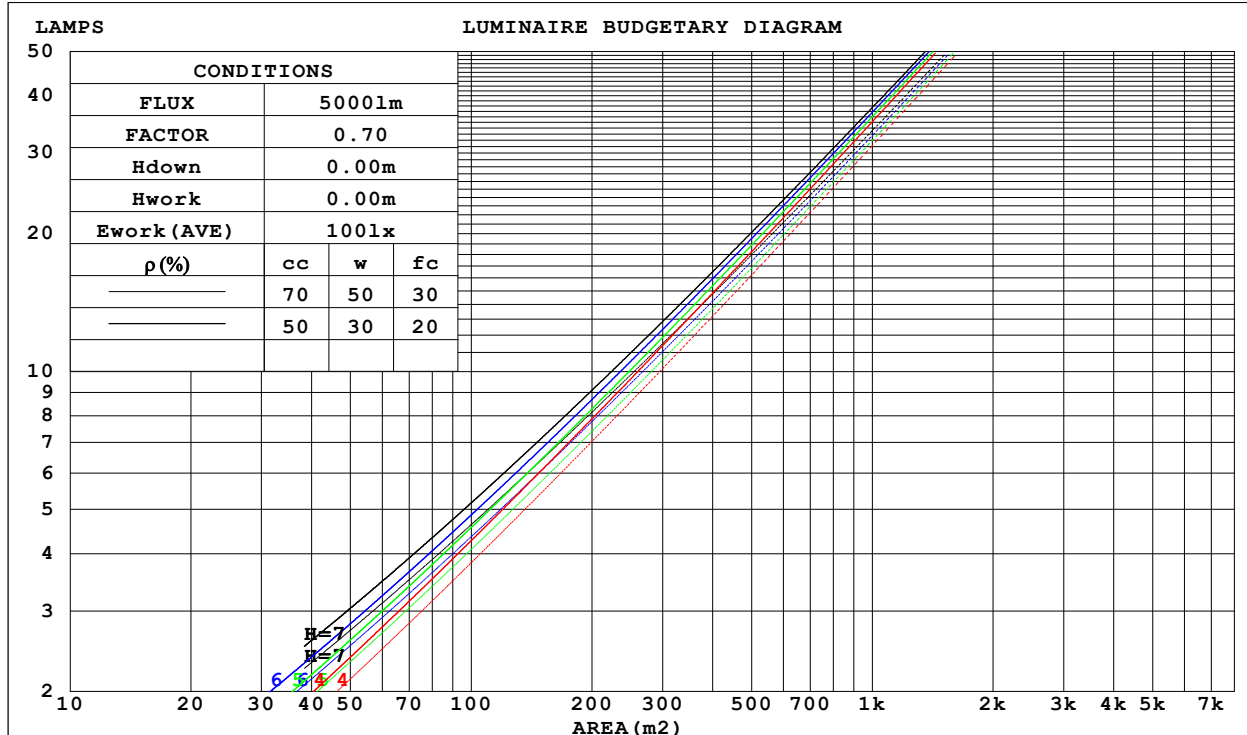
H(β) Range: -90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature: 26DEG
Operators:
Test Date: 2020-10-26

V(B) Range: -60 - 60DEG
V(B) Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity: 65.0%
Test Distance: 8.660m [K=1.0000]
Remarks: --

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

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	.96	.96	.96	.94	.94	.94	.90	.90	.90	.86	.86	.86	.82	.82	.82	.81
1.0	.90	.88	.86	.88	.86	.85	.85	.83	.82	.82	.81	.80	.79	.78	.77	.76
2.0	.84	.81	.78	.83	.80	.77	.80	.78	.76	.78	.76	.74	.75	.74	.73	.71
3.0	.79	.75	.72	.78	.74	.71	.75	.73	.70	.74	.71	.69	.72	.70	.68	.67
4.0	.74	.70	.66	.73	.69	.66	.71	.68	.65	.70	.67	.65	.68	.66	.64	.63
5.0	.70	.65	.62	.69	.65	.62	.67	.64	.61	.66	.63	.60	.65	.62	.60	.59
6.0	.66	.61	.58	.65	.61	.58	.64	.60	.57	.63	.59	.57	.62	.59	.56	.55
7.0	.62	.57	.54	.62	.57	.54	.61	.57	.54	.60	.56	.54	.59	.56	.53	.52
8.0	.59	.54	.51	.58	.54	.51	.57	.54	.51	.57	.53	.51	.56	.53	.50	.49
9.0	.56	.51	.48	.55	.51	.48	.55	.51	.48	.54	.50	.48	.53	.50	.48	.47
10.0	.53	.49	.46	.53	.48	.46	.52	.48	.45	.51	.48	.45	.51	.48	.45	.44



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

WEC AND CCEC

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

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	.138	.079	.025	.133	.076	.024	.123	.070	.022	.113	.065	.021	.105	.061	.020	
2.0	.132	.072	.022	.127	.070	.022	.119	.066	.020	.111	.062	.019	.104	.059	.018	
3.0	.125	.067	.020	.121	.065	.020	.114	.062	.019	.107	.059	.018	.101	.056	.017	
4.0	.119	.062	.018	.116	.061	.018	.110	.058	.017	.104	.056	.017	.098	.053	.016	
5.0	.113	.058	.017	.111	.057	.017	.105	.055	.016	.100	.053	.016	.095	.051	.015	
6.0	.108	.054	.016	.106	.053	.015	.101	.052	.015	.097	.050	.015	.092	.049	.014	
7.0	.103	.051	.015	.101	.050	.014	.097	.049	.014	.093	.048	.014	.089	.046	.014	
8.0	.099	.048	.014	.097	.048	.014	.093	.047	.013	.090	.046	.013	.087	.044	.013	
9.0	.095	.046	.013	.093	.045	.013	.090	.044	.013	.087	.043	.012	.084	.043	.012	
10.0	.091	.044	.012	.090	.043	.012	.087	.042	.012	.084	.042	.012	.081	.041	.012	

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	.154	.154	.154	.132	.132	.132	.090	.090	.090	.052	.052	.052	.016	.016	.016	
1.0	.138	.127	.117	.118	.109	.101	.081	.075	.070	.046	.043	.041	.015	.014	.013	
2.0	.125	.107	.092	.107	.092	.079	.074	.064	.055	.042	.037	.032	.014	.012	.011	
3.0	.115	.092	.073	.099	.079	.063	.068	.055	.045	.039	.032	.026	.013	.010	.009	
4.0	.106	.080	.059	.091	.069	.052	.063	.048	.036	.036	.028	.021	.012	.009	.007	
5.0	.099	.070	.049	.085	.061	.043	.059	.043	.030	.034	.025	.018	.011	.008	.006	
6.0	.093	.063	.041	.080	.054	.036	.055	.038	.025	.032	.022	.015	.010	.007	.005	
7.0	.088	.057	.035	.076	.049	.030	.052	.034	.021	.030	.020	.013	.010	.007	.004	
8.0	.083	.051	.030	.072	.045	.026	.050	.031	.018	.029	.018	.011	.009	.006	.004	
9.0	.079	.047	.026	.068	.041	.022	.047	.029	.016	.027	.017	.010	.009	.006	.003	
10.0	.075	.044	.023	.065	.038	.020	.045	.027	.014	.026	.016	.008	.009	.005	.003	

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:26DEG
 Operators:
 Test Date:2020-10-26

V(B) Range:-60 - 60DEG
 V(B) Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:8.660m [K=1.0000]
 Remarks: --

UGR(Unified Glare Rating) Table

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm										
NAME: DR-A074					TYPE:--			SERIAL No.:		
SPEC.:AS05-7					DIM.: --					
MFR.:					SUR.:126					
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	16.5	17.4	16.7	17.6	17.7	17.9	18.8	18.1	19.0	19.1
3H	16.5	17.4	16.8	17.6	17.8	17.7	18.6	18.0	18.8	19.0
4H	16.5	17.3	16.8	17.5	17.7	17.6	18.4	17.9	18.6	18.9
6H	16.5	17.2	16.8	17.5	17.7	17.6	18.3	17.8	18.5	18.8
8H	16.5	17.2	16.8	17.4	17.7	17.5	18.2	17.8	18.5	18.7
12H	16.5	17.1	16.8	17.4	17.7	17.5	18.1	17.8	18.4	18.7
4H 2H	16.4	17.1	16.6	17.4	17.6	17.7	18.5	18.0	18.7	18.9
3H	16.4	17.1	16.7	17.4	17.6	17.5	18.2	17.8	18.5	18.7
4H	16.4	17.1	16.8	17.4	17.7	17.4	18.0	17.8	18.3	18.6
6H	16.4	17.0	16.8	17.3	17.7	17.3	17.9	17.7	18.2	18.5
8H	16.4	16.9	16.8	17.3	17.6	17.3	17.8	17.7	18.1	18.5
12H	16.4	16.9	16.8	17.2	17.6	17.2	17.7	17.6	18.1	18.4
8H 4H	16.3	16.8	16.7	17.1	17.5	17.3	17.8	17.7	18.1	18.5
6H	16.3	16.7	16.7	17.1	17.5	17.2	17.6	17.6	18.0	18.4
8H	16.3	16.6	16.7	17.0	17.5	17.1	17.5	17.6	17.9	18.4
12H	16.2	16.5	16.7	17.0	17.5	17.1	17.4	17.5	17.8	18.3
12H 4H	16.2	16.7	16.7	17.1	17.5	17.2	17.7	17.6	18.1	18.5
6H	16.2	16.6	16.7	17.0	17.4	17.1	17.5	17.6	17.9	18.4
8H	16.2	16.5	16.7	17.0	17.4	17.1	17.4	17.5	17.8	18.3
Variations with the observer position at spacings:										
S = 1.0H	+ 2.1 / - 2.3					+ 3.5 / - 7.1				
1.5H	+ 3.8 / - 1.6					+ 5.9 / - 5.5				
2.0H	+ 1.7 / - 1.6					+ 2.8 / - 2.4				

CIE Pub.117, 2915 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 3.7$)
Area: 0.0124627 m²

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

UTILIZATION FACTORS TABLE

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

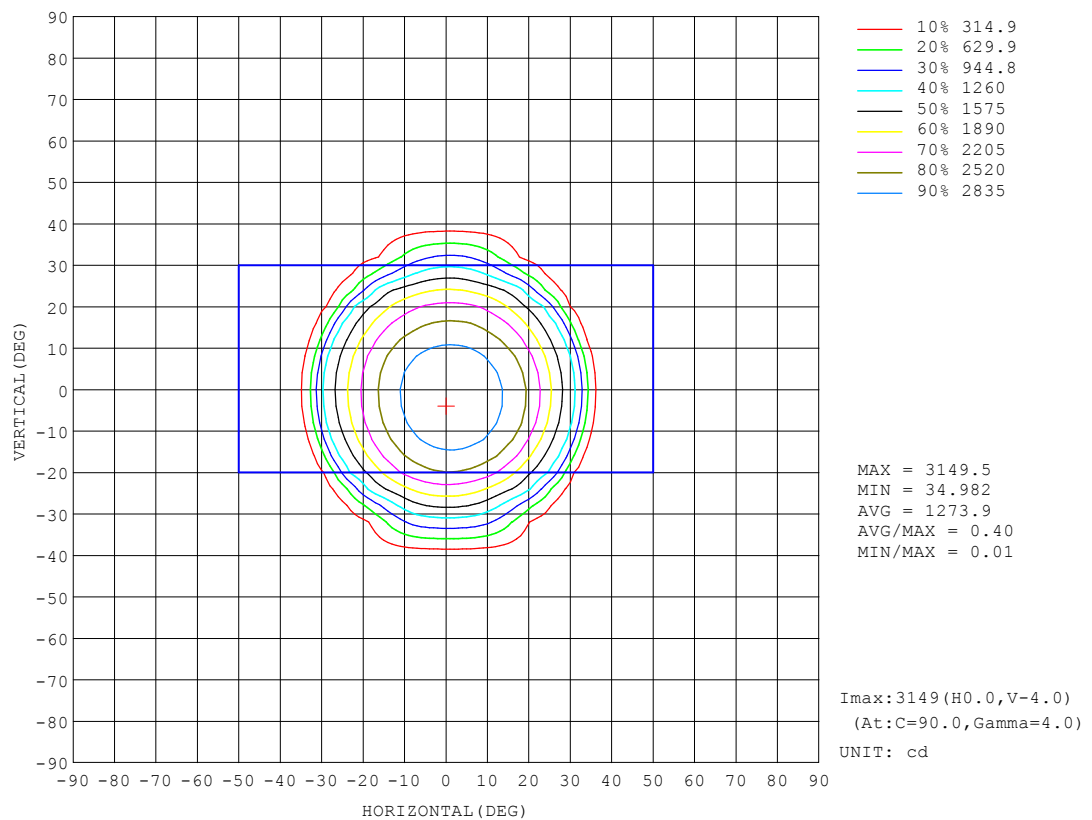
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	71	66	64	71	66	63	70	66	63	61
0.80	77	73	70	77	73	70	76	72	69	67
1.00	81	76	74	80	76	73	79	76	73	70
1.25	84	80	77	83	79	77	82	78	76	73
1.50	86	82	80	85	82	79	83	81	78	75
2.00	88	85	82	87	84	82	85	82	80	76
2.50	89	86	84	88	85	83	86	84	82	77
3.00	91	88	86	89	87	85	86	85	83	78
4.00	92	90	88	91	89	87	88	86	85	79
5.00	93	91	90	91	90	89	88	87	86	80
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

H(β) Range: -90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature: 26DEG
Operators:
Test Date: 2020-10-26

V(B) Range: -60 - 60DEG
V(B) Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity: 65.0%
Test Distance: 8.660m [K=1.0000]
Remarks: --

ISOCANDELA DIAGRAM

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

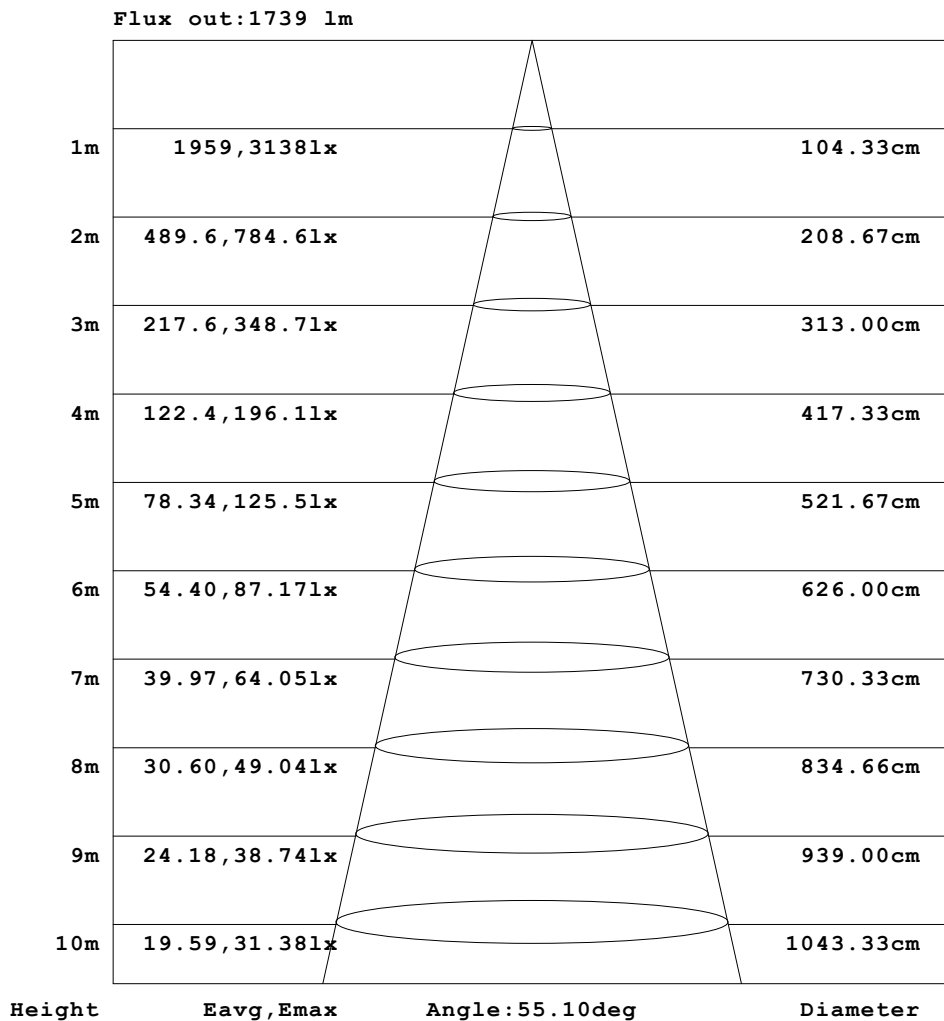


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

AAI Figure

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	



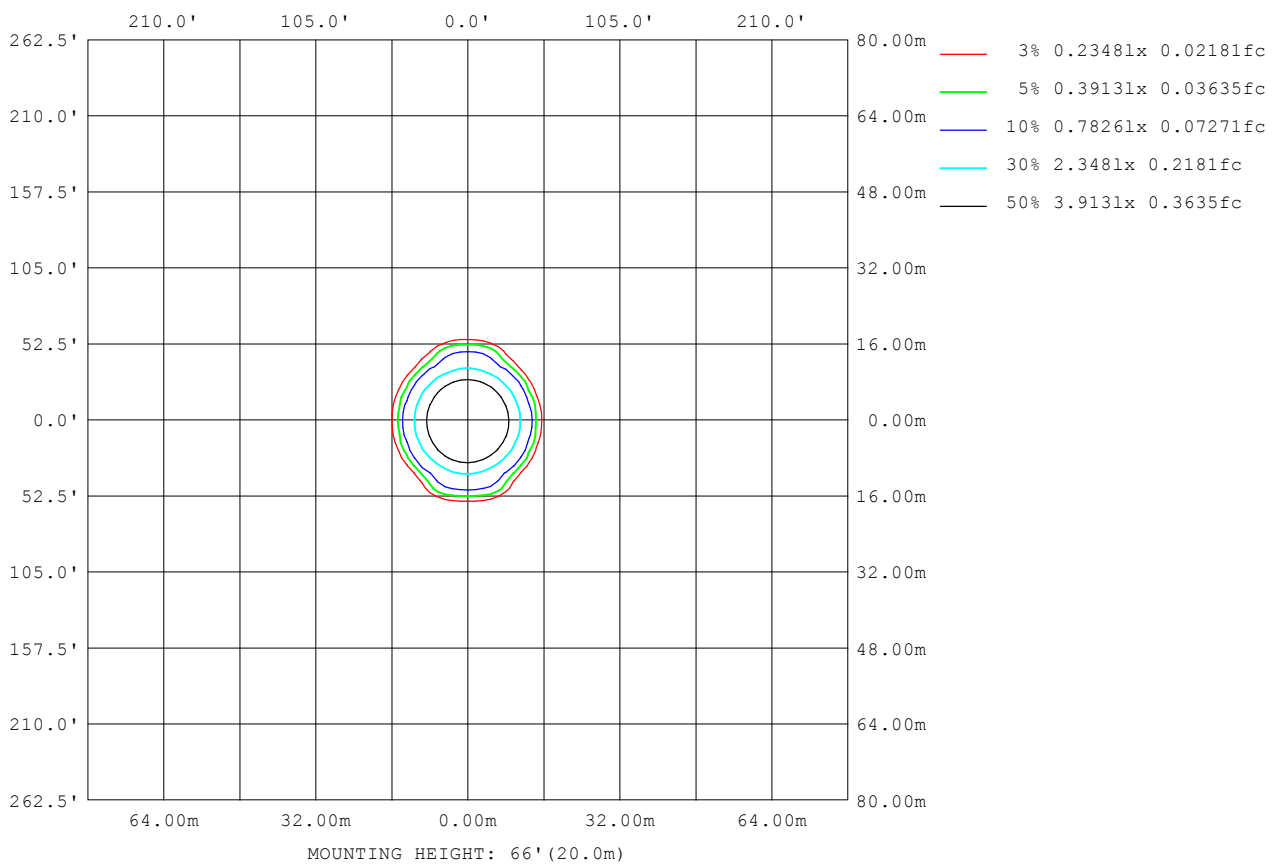
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

ISOLUX DIAGRAM

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

LED Avg.L Report

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

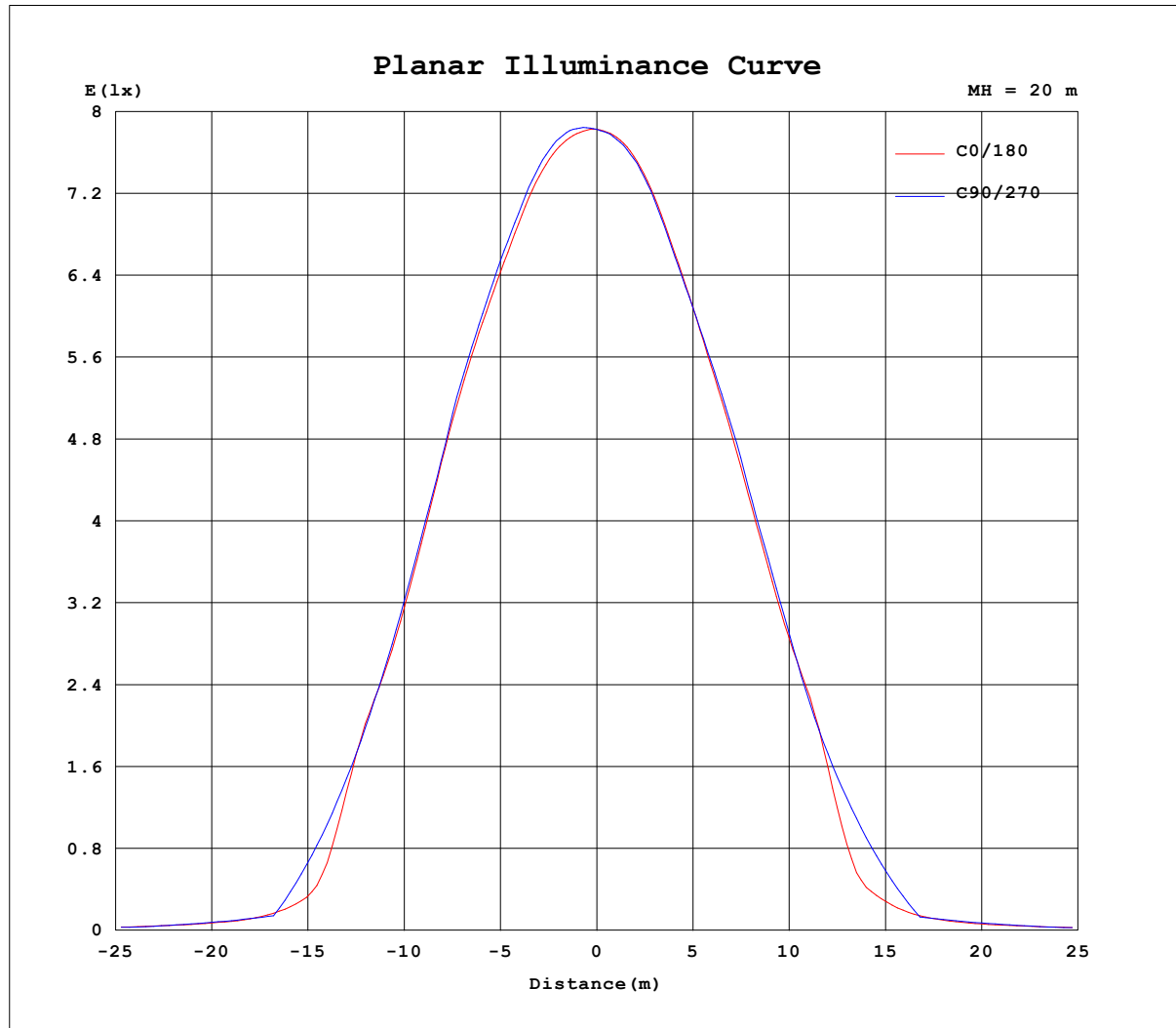
AvgL	cd/m2
L_0~180 (65) av	3583
L_0~180 (75) av	2634
L_0~180 (85) av	1531
L_90~270 (65) av	0
L_90~270 (75) av	0
L_90~270 (85) av	0
L_45 (65) av	3507
L_45 (75) av	0
L_45 (85) av	0

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26

V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --

```
V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --
```

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

Table--2

UNIT: cd

[illegible]

```
H( $\beta$ ) Range:-90 - 90DEG
H( $\beta$ ) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26
```

```
V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --
```

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:221.00V I:0.1723A P:36.764W PF:0.9653 Freq:60.00Hz Lamp Flux:2915x1 lm		
NAME: DR-A074	TYPE:--	SERIAL No.:
SPEC.:AS05-7	DIM.: --	
MFR.:	SUR.:126	

Table--3

UNIT: cd

[illegible]

```
H( $\beta$ ) Range:-90 - 90DEG
H( $\beta$ ) Interval: 1.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:
Test Date:2020-10-26
```

```
V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --
```

```
V(B) Range:-60 - 60DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:8.660m [K=1.0000]
Remarks: --
```