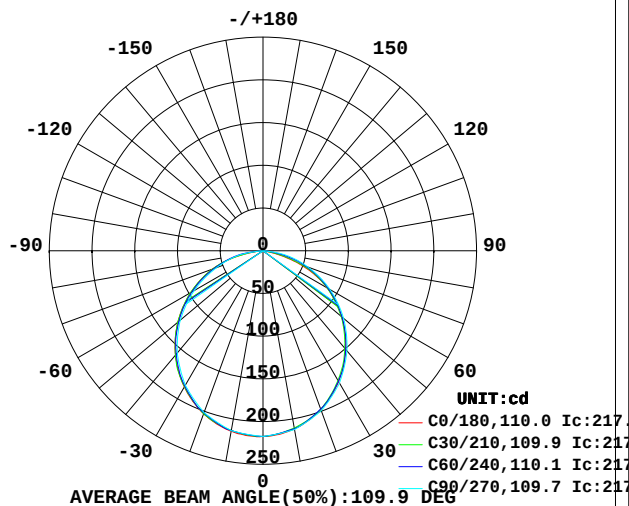


LUMINAIRE PHOTOMETRIC TEST REPORT

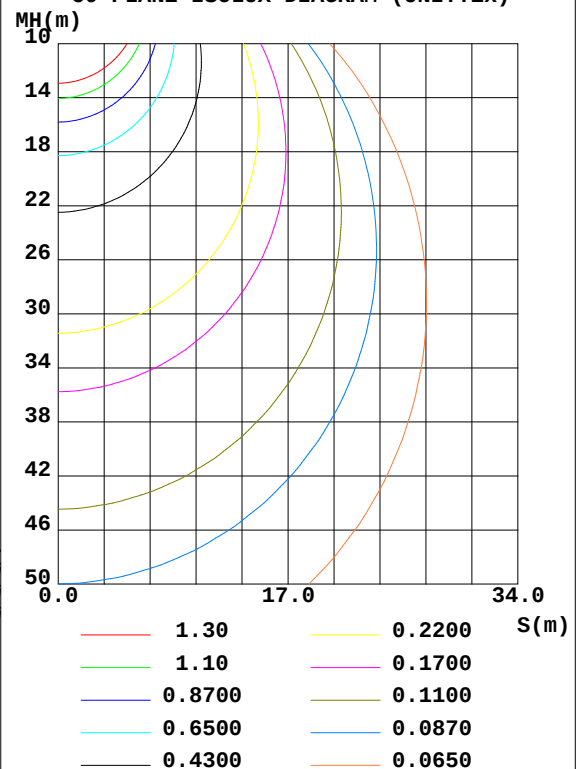
Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 65.79 lm/W			
MODEL	3000K	I _{max} (cd)	217.7	S/MH(C0/180)	1.26
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	594.74	η UP, DN(C0-180)	0.0, 49.6
NOMINAL FLUX(lm)	594.741	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2020-05-07

V(B) Range:-80 - 80DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:6.880m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

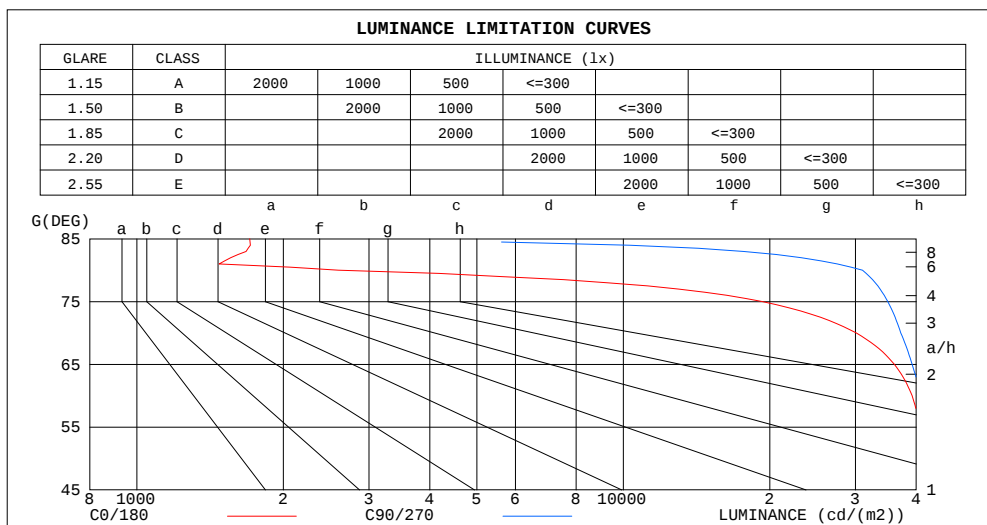
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	211.7	210.7	212.5	212.7	214.5	213.7	213.9	211.7	0- 10	20.48	20.48	3.44, 3.44
20	197.8	196.6	199.3	200.6	202.9	202.3	201.6	198.5	10- 20	58.40	78.88	13.3, 13.3
30	177.0	175.8	178.9	181.9	184.2	183.9	181.8	178.3	20- 30	87.83	166.7	28, 28
40	150.6	150.2	152.9	157.0	159.3	159.3	156.1	152.4	30- 40	104.9	271.7	45.7, 45.7
50	120.0	120.3	123.1	127.0	130.1	130.0	126.3	122.0	40- 50	107.9	379.6	63.8, 63.8
60	86.69	87.39	90.41	94.02	97.35	96.95	92.79	88.81	50- 60	96.87	476.5	80.1, 80.1
70	45.52	51.62	56.21	59.79	62.87	62.43	57.48	52.18	60- 70	73.29	549.7	92.4, 92.4
80	1.993	11.66	23.80	26.58	20.13	25.03	26.90	12.89	70- 80	39.21	589.0	99, 99
90	0.3377	0	0	0	0.2552	0	0	0	80- 90	5.791	594.7	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:cd									UNIT:lm		

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2020-05-07

V(B) Range:-80 - 80DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:6.880m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1705	0
80	2596	31013
75	19300	34973
70	30113	37185
65	36059	39247
60	39225	40909
55	40897	42117
50	42230	43342
45	43434	44161

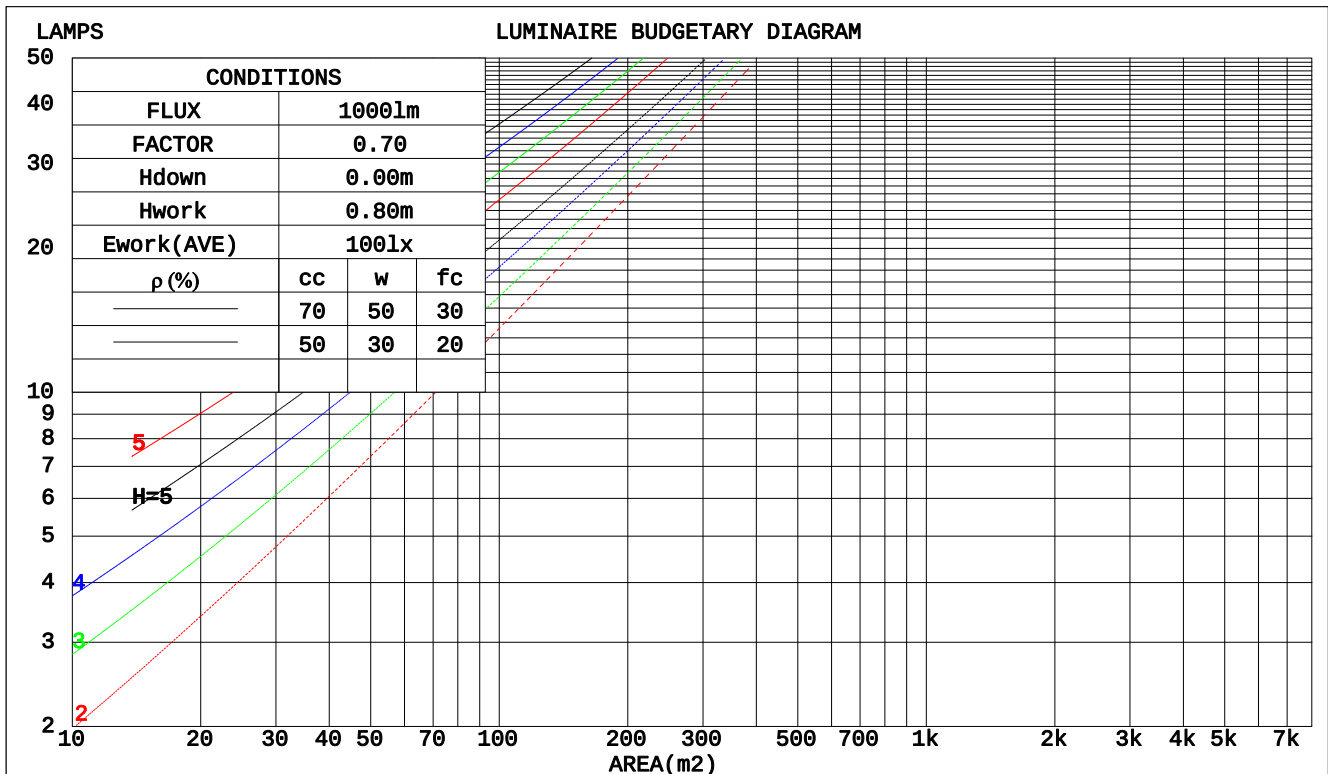
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	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	1.04	1.00	.97	1.02	.98	.95	.98	.95	.92	.94	.92	.89	.90	.88	.87	.85
2.0	.91	.84	.79	.89	.83	.78	.86	.81	.76	.82	.78	.74	.79	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.67	.63	.70	.66	.62	.59
4.0	.71	.62	.56	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.54	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.36	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.30	.43	.35	.30	.42	.34	.29	.41	.34	.29	.40	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.38	.31	.27	.37	.31	.26	.25



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm									
NAME: DL1071 WH TC					TYPE:			WEIGHT:	
SPEC.:10W					DIM.:			SERIAL No.:	
MFR.: OBALS					SUR.:75mm			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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.298	.169	.054	.291	.166	.053	.278	.159	.051	.266	.153	.049	.254	.147	.048	
2.0	.285	.156	.048	.279	.153	.047	.267	.148	.046	.256	.144	.045	.246	.139	.044	
3.0	.265	.141	.042	.260	.139	.042	.250	.135	.041	.240	.132	.040	.231	.128	.040	
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.215	.117	.036	
5.0	.228	.116	.034	.224	.115	.033	.215	.112	.033	.208	.110	.033	.201	.107	.032	
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.197	.098	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.176	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.179	.156	.135	.154	.134	.116	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.147	.114	.085	.101	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.090	.048	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2020-05-07

$V(B)$ Range:-80 - 80DEG
 $V(B)$ Interval: 5.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:6.880m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm											
NAME: DL1071 WH TC						TYPE:			WEIGHT:		
SPEC.:10W						DIM.:			SERIAL No.:		
MFR.: OBALS						SUR.:75mm			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	2H	27.4	28.9	27.6	29.1	29.3	27.6	29.1	27.8	29.3	29.5
	3H	28.6	29.9	28.9	30.2	30.4	29.1	30.5	29.4	30.7	30.9
	4H	28.8	30.1	29.1	30.4	30.6	29.7	31.0	30.0	31.3	31.5
	6H	28.7	30.0	29.1	30.3	30.5	30.1	31.4	30.5	31.6	31.9
	8H	28.7	29.9	29.0	30.2	30.5	30.2	31.4	30.6	31.7	32.0
	12H	28.6	29.8	29.0	30.1	30.4	30.2	31.3	30.5	31.6	31.9
4H	2H	28.0	29.3	28.3	29.5	29.8	28.1	29.5	28.4	29.7	30.0
	3H	29.3	30.5	29.7	30.8	31.1	29.8	31.0	30.2	31.3	31.6
	4H	29.6	30.7	30.0	31.0	31.3	30.5	31.6	30.9	31.9	32.2
	6H	29.6	30.5	30.0	30.9	31.3	31.1	32.0	31.5	32.4	32.7
	8H	29.6	30.4	30.0	30.8	31.2	31.2	32.1	31.6	32.4	32.8
	12H	29.5	30.3	29.9	30.7	31.1	31.2	32.0	31.6	32.4	32.8
8H	4H	29.8	30.7	30.2	31.1	31.4	30.7	31.5	31.1	31.9	32.3
	6H	29.8	30.6	30.3	31.0	31.4	31.3	32.0	31.7	32.4	32.8
	8H	29.8	30.4	30.3	30.9	31.3	31.4	32.1	31.9	32.5	33.0
	12H	29.8	30.3	30.2	30.8	31.2	31.4	32.0	31.9	32.4	32.9
12H	4H	29.8	30.6	30.2	31.0	31.4	30.6	31.4	31.1	31.8	32.2
	6H	29.8	30.5	30.3	30.9	31.4	31.3	31.9	31.7	32.3	32.8
	8H	29.8	30.4	30.3	30.8	31.3	31.4	32.0	31.9	32.4	32.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.2 / - 0.3					

CIE Pub.117, 594.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.8)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

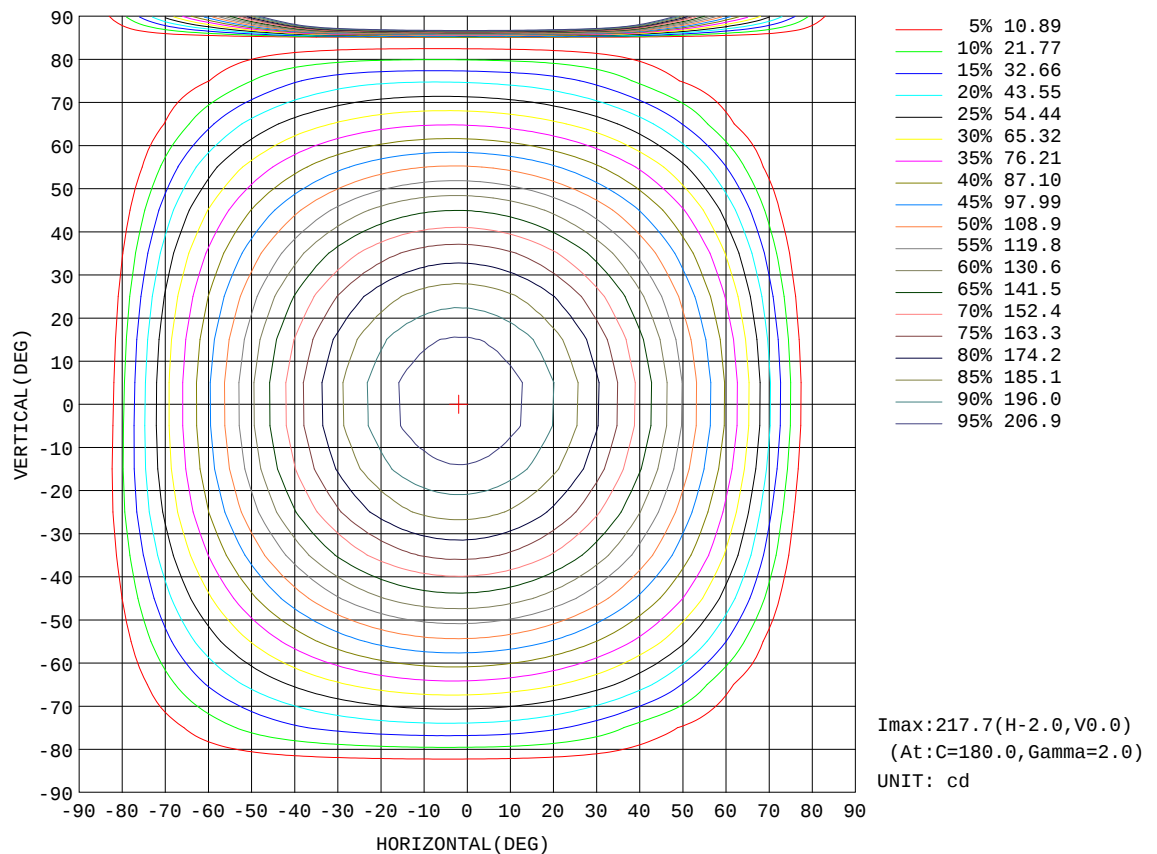
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	47	40	57	46	40	56	46	39	33
0.80	68	57	49	67	56	49	65	55	49	42
1.00	77	66	58	75	65	58	73	66	58	51
1.25	84	73	66	82	73	66	80	71	65	58
1.50	89	79	72	87	78	72	84	76	71	63
2.00	96	87	81	94	86	80	90	84	79	71
2.50	99	92	86	97	91	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	104	100	95	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	87
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:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:



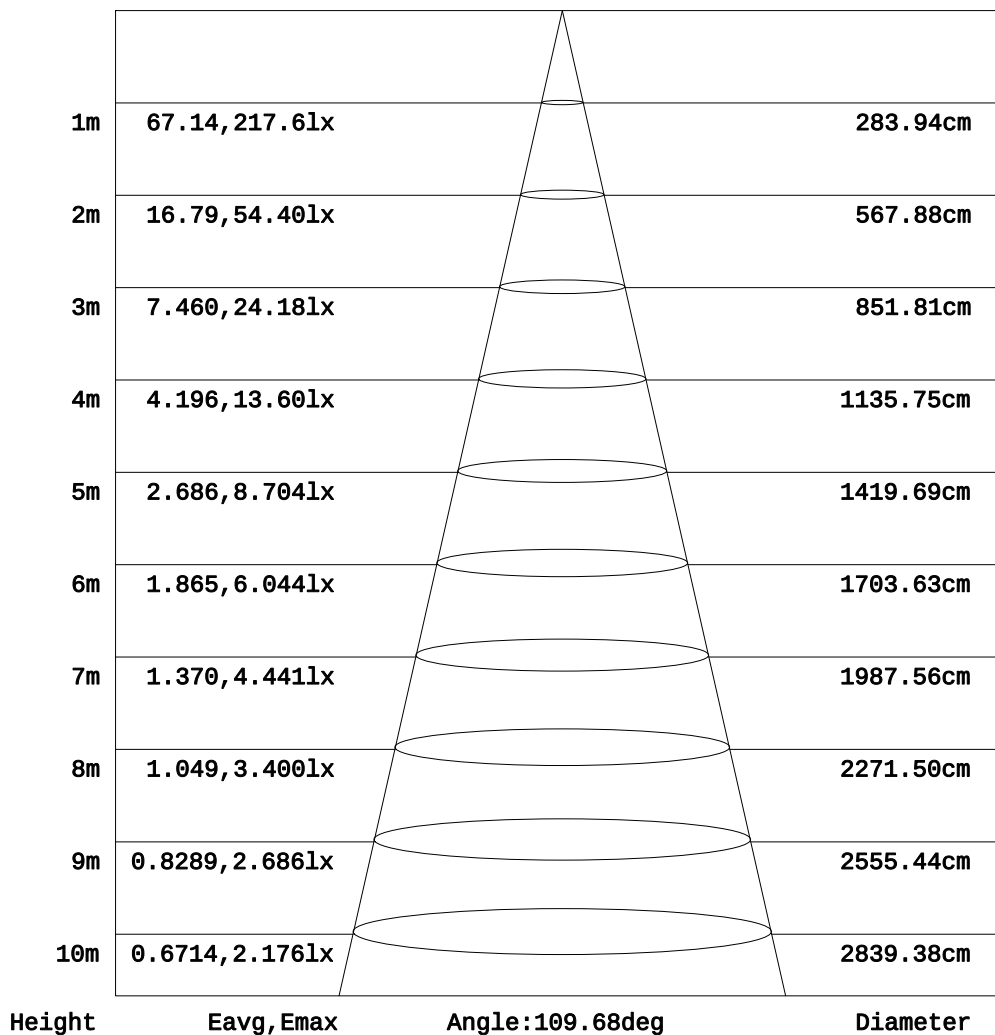
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

Flux out:430.2 lm



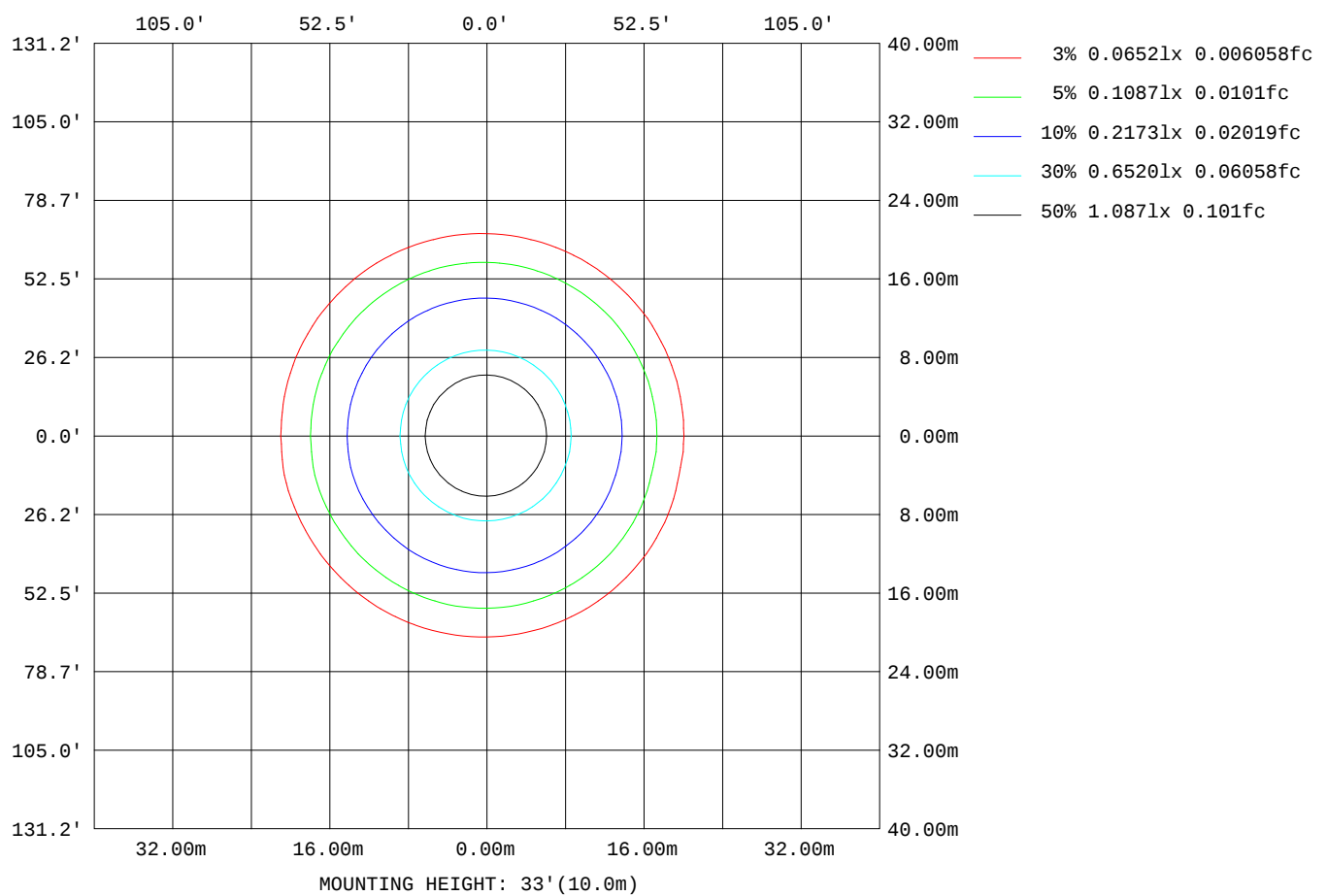
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:220.33V I:0.0439A P:9.0399W PF:0.9351 Freq:50.01Hz Lamp Flux:594.741x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

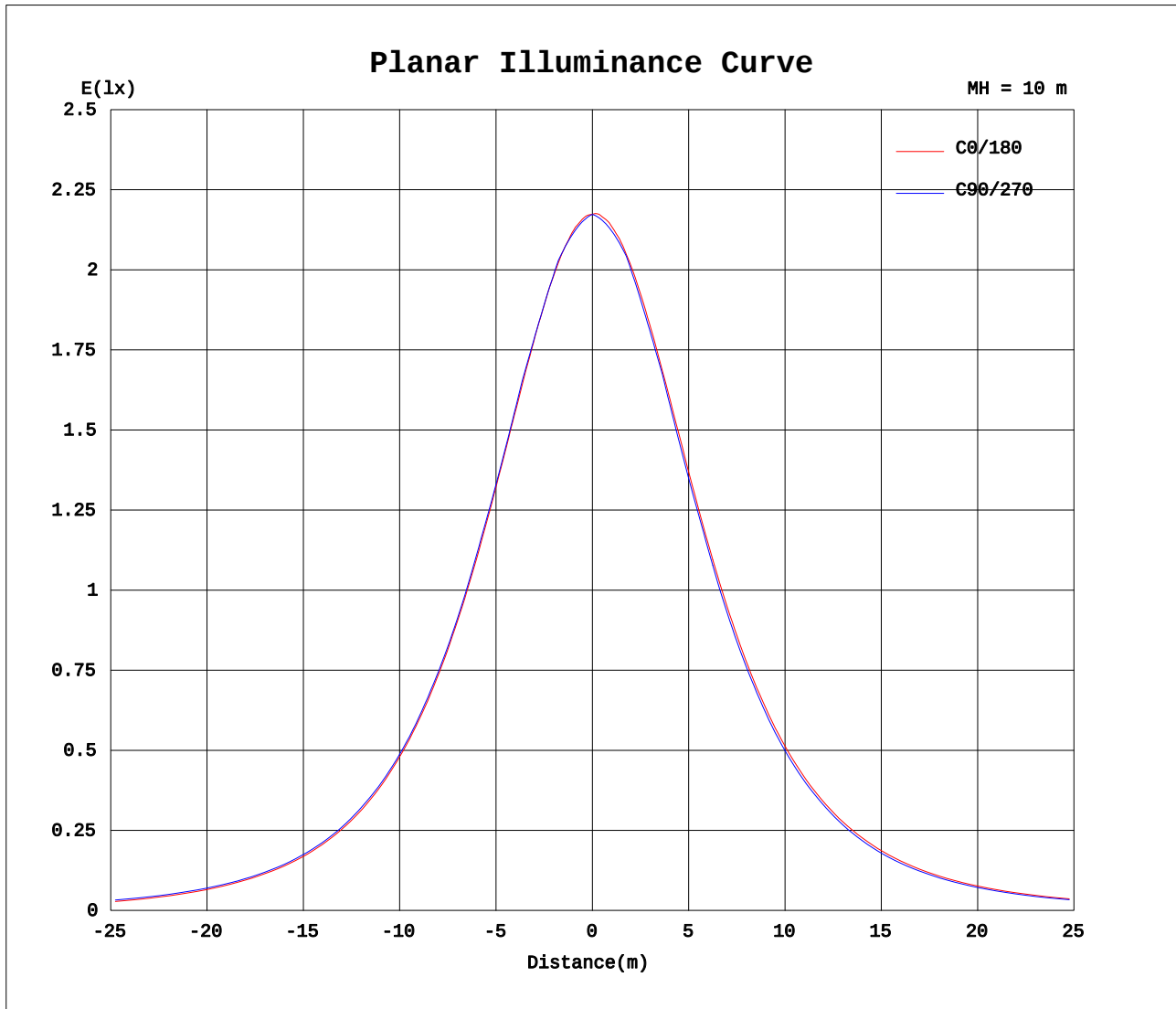
AvgL	cd/m2
L_0~180(65)av	39517
L_0~180(75)av	28322
L_0~180(85)av	3205
L_90~270(65)av	39734
L_90~270(75)av	35926
L_90~270(85)av	0
L_45(65)av	39835
L_45(75)av	32861
L_45(85)av	8992

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2020-05-07

V(B) Range:-80 - 80DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
 Humidity:65.0%
 Test Distance:6.880m [K=1.0000]
 Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:
```

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:
```

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:
```

```
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:6.880m [K=1.0000]
Remarks:
```