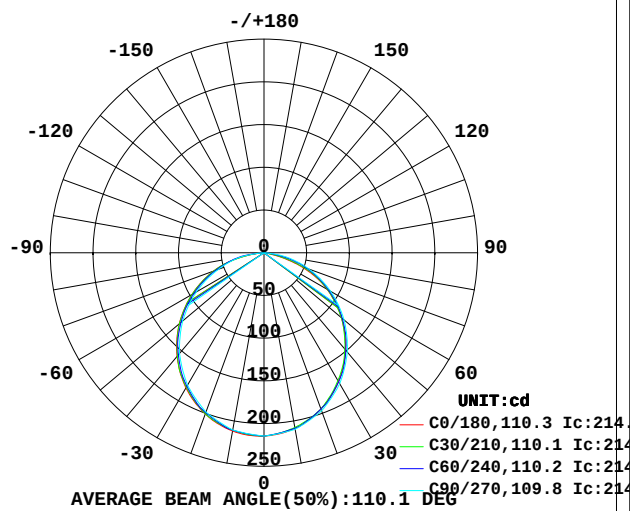


LUMINAIRE PHOTOMETRIC TEST REPORT

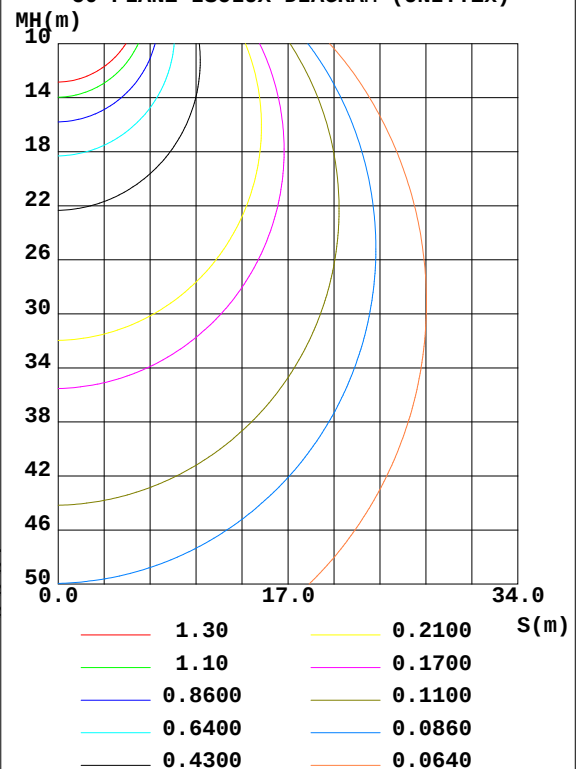
Test:U:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 66.73 lm/W			
MODEL	5700K	I _{max} (cd)	214.7	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)	588.35	η UP, DN(C0-180)	0.0, 49.7
NOMINAL FLUX(lm)	588.349	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.3
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:

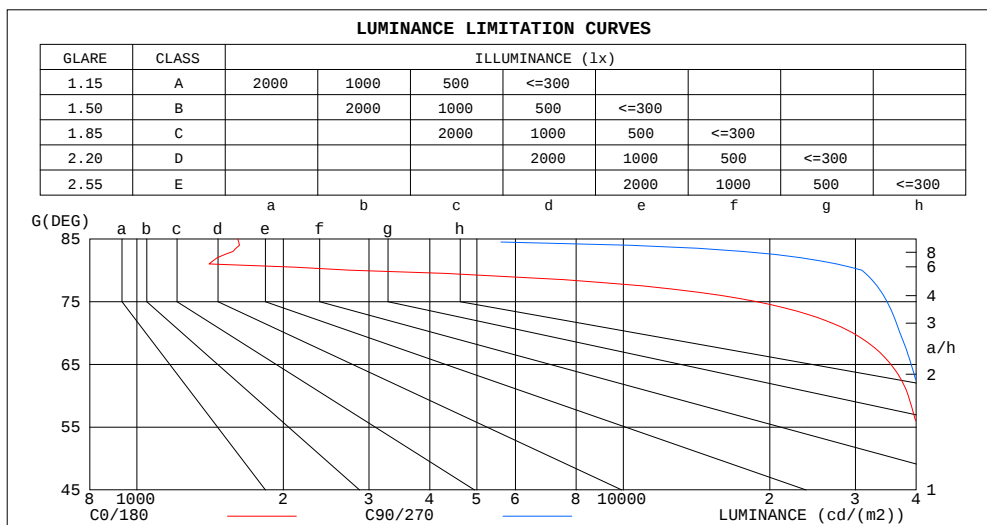
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	208.7	207.8	209.9	210.2	211.9	210.8	210.7	208.5	0- 10	20.20	20.20	3.43, 3.43
20	194.8	194.1	197.0	198.6	200.8	199.6	198.5	195.2	10- 20	57.63	77.83	13.2, 13.2
30	174.2	173.8	177.2	180.4	182.6	181.6	179.0	175.3	20- 30	86.72	164.6	28, 28
40	148.2	148.7	151.7	155.7	158.4	157.3	153.8	150.1	30- 40	103.7	268.3	45.6, 45.6
50	118.1	119.0	122.4	126.6	129.4	128.6	124.2	120.0	40- 50	106.7	375.0	63.7, 63.7
60	85.15	86.64	89.98	93.87	97.05	95.84	91.25	87.06	50- 60	95.85	470.9	80, 80
70	44.80	51.09	55.97	59.86	63.04	61.73	56.41	51.21	60- 70	72.55	543.4	92.4, 92.4
80	2.103	11.60	23.74	26.84	22.05	25.71	26.30	12.76	70- 80	39.05	582.5	99, 99
90	0.3495	0	0	0	0.2709	0	0	0	80- 90	5.896	588.3	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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 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	1612	0
80	2740	30927
75	18763	34838
70	29637	37025
65	35481	39066
60	38528	40714
55	40195	41889
50	41579	43087
45	42751	43860

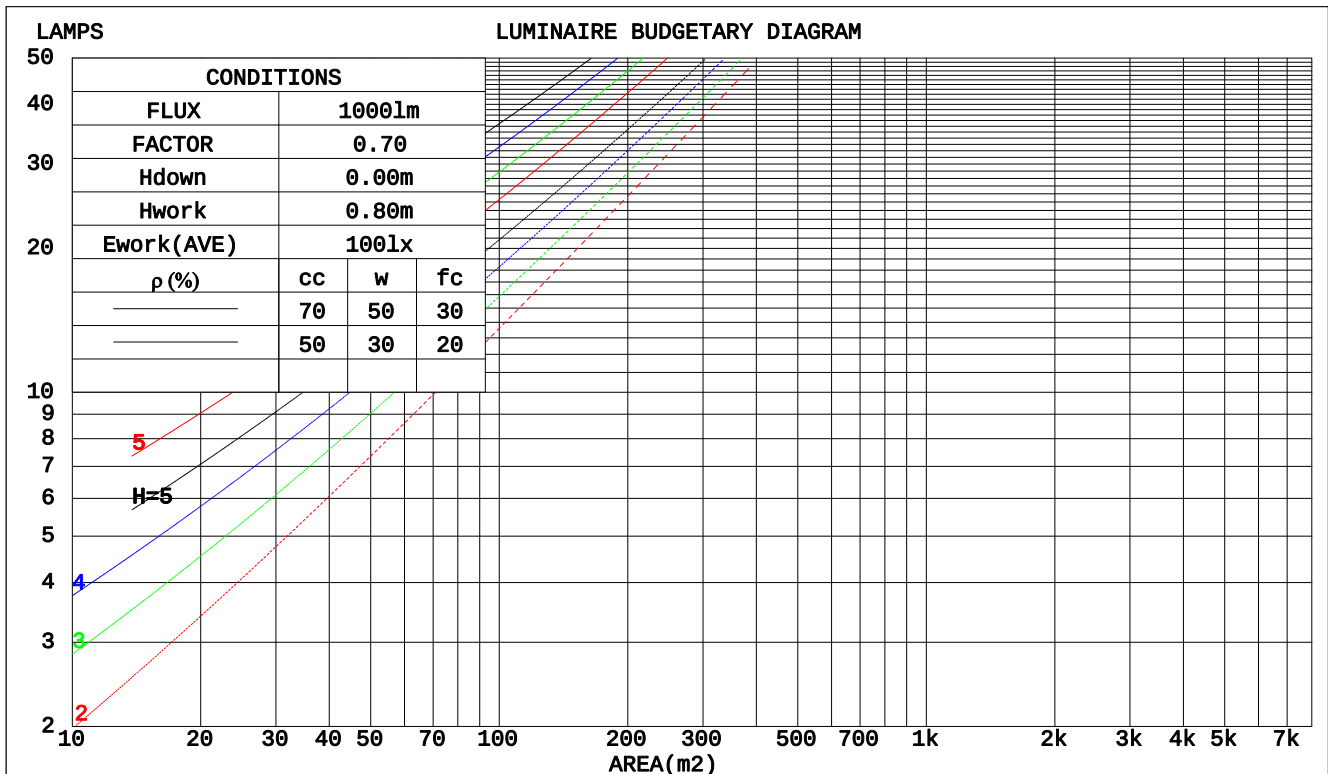
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 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	.00
1.0	1.04	1.00	.97	1.02	.98	.95	.98	.95	.92	.94	.92	.89	.90	.88	.87	.84
2.0	.91	.84	.79	.89	.83	.78	.86	.80	.76	.82	.78	.74	.79	.76	.73	.70
3.0	.80	.72	.66	.78	.71	.65	.75	.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	.46	.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	.29	.42	.34	.29	.40	.34	.29	.39	.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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 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	.170	.054	.291	.166	.053	.278	.160	.051	.266	.153	.049	.255	.148	.048			
2.0	.285	.156	.048	.279	.154	.047	.267	.149	.046	.257	.144	.045	.247	.140	.044			
3.0	.266	.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	.224	.120	.036	.216	.117	.036			
5.0	.228	.116	.034	.224	.115	.033	.216	.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			

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.180	.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	.077	.042	.018	.045	.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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 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	27.3	28.9	27.6	29.1	29.3	27.6	29.1	27.9	29.3	29.5	
	3H	28.6	29.9	28.8	30.2	30.4	29.1	30.5	29.4	30.7	31.0
	4H	28.8	30.1	29.1	30.4	30.6	29.7	31.0	30.0	31.3	31.6
	6H	28.7	30.0	29.1	30.2	30.5	30.2	31.4	30.5	31.7	32.0
	8H	28.7	29.9	29.0	30.2	30.4	30.2	31.4	30.6	31.7	32.0
	12H	28.6	29.8	29.0	30.1	30.4	30.2	31.4	30.6	31.7	32.0
4H	2H	28.0	29.3	28.3	29.5	29.8	28.2	29.5	28.5	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	30.6	31.6	30.9	31.9	32.3
	6H	29.6	30.5	30.0	30.9	31.2	31.1	32.0	31.5	32.4	32.8
	8H	29.6	30.4	30.0	30.8	31.2	31.2	32.1	31.6	32.5	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	31.0	31.4	30.7	31.6	31.1	31.9	32.3
	6H	29.8	30.6	30.3	31.0	31.4	31.3	32.0	31.8	32.4	32.9
	8H	29.8	30.4	30.3	30.9	31.3	31.5	32.1	31.9	32.5	33.0
	12H	29.8	30.3	30.2	30.8	31.2	31.5	32.0	31.9	32.5	32.9
12H	4H	29.8	30.6	30.2	31.0	31.4	30.7	31.4	31.1	31.8	32.2
	6H	29.8	30.5	30.3	30.9	31.3	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, 588.3 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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

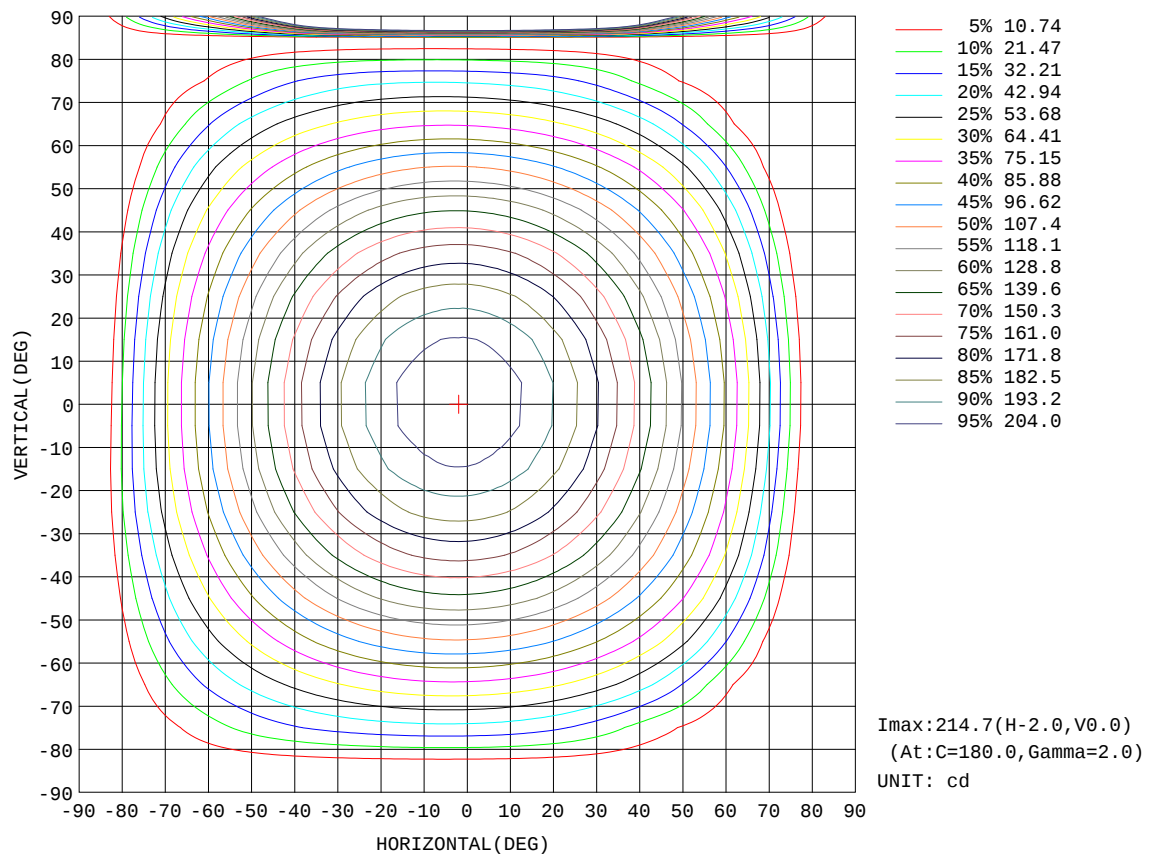
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	47	40	57	46	39	56	46	39	33
0.80	68	57	49	67	56	49	65	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	90	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	87	79
4.00	107	101	97	104	99	95	100	96	93	84
5.00	109	104	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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:



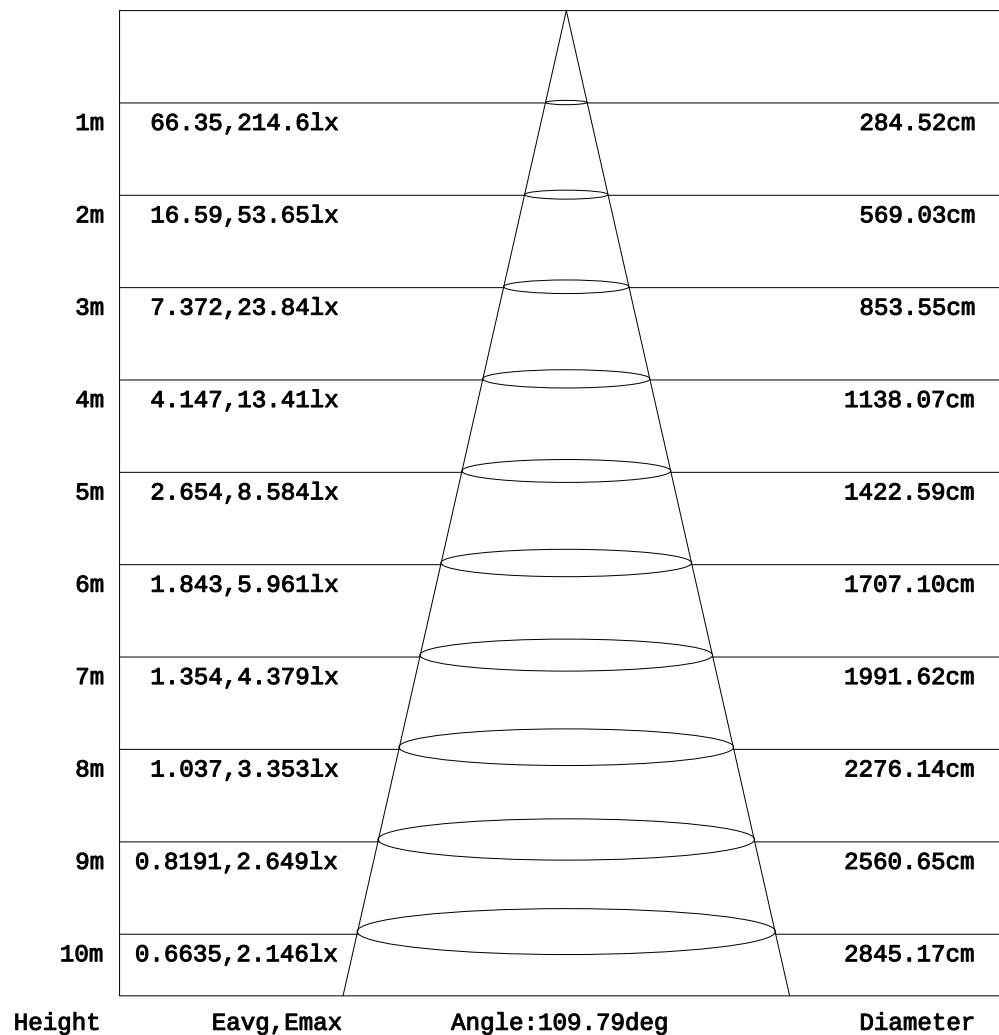
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-07

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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

Flux out:425.1 lm



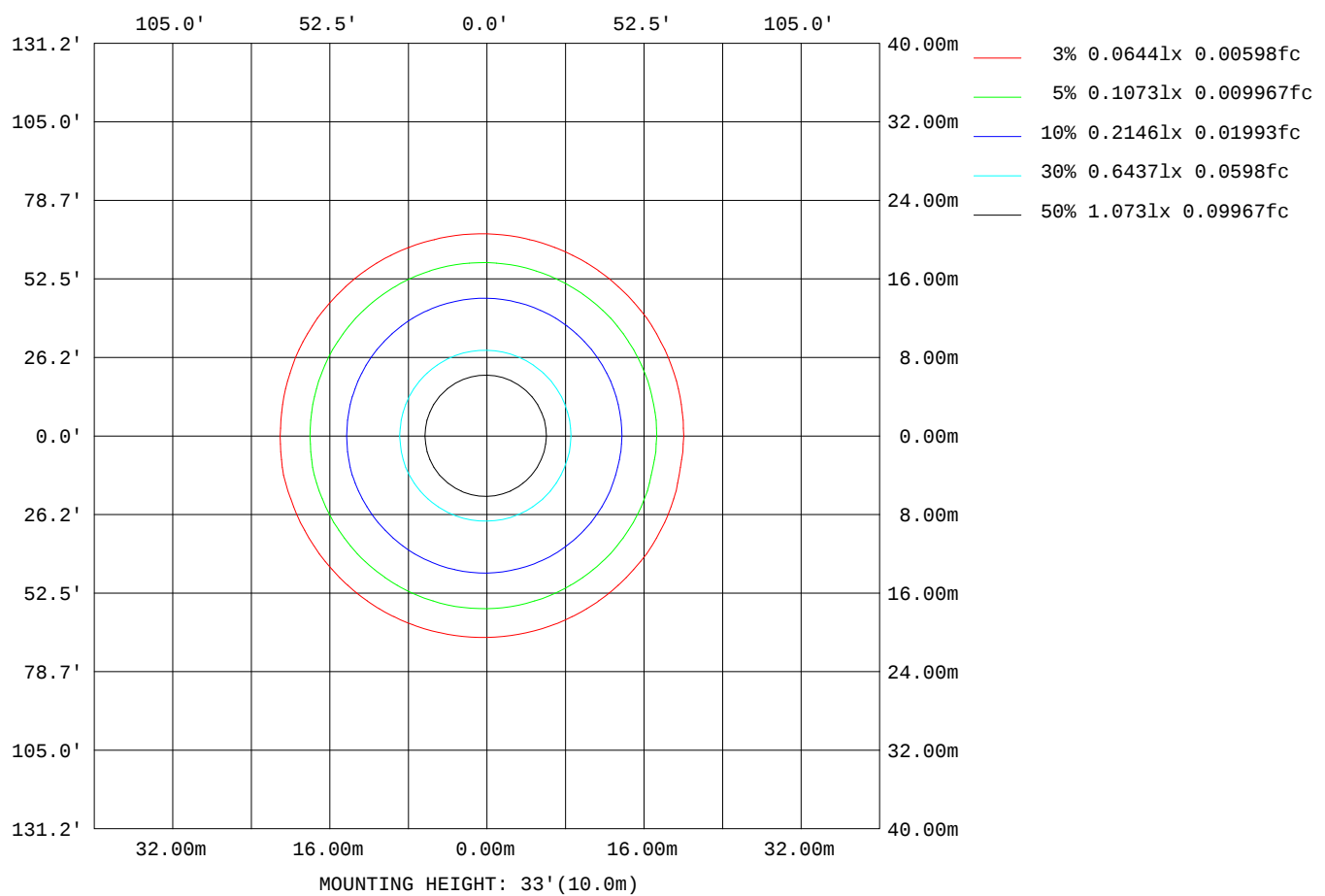
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 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:220.31V I:0.0428A P:8.8166W PF:0.9339 Freq:50.01Hz Lamp Flux:588.349x1 lm		
NAME: DL1071 WH TC	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:75mm	Shielding Angle:

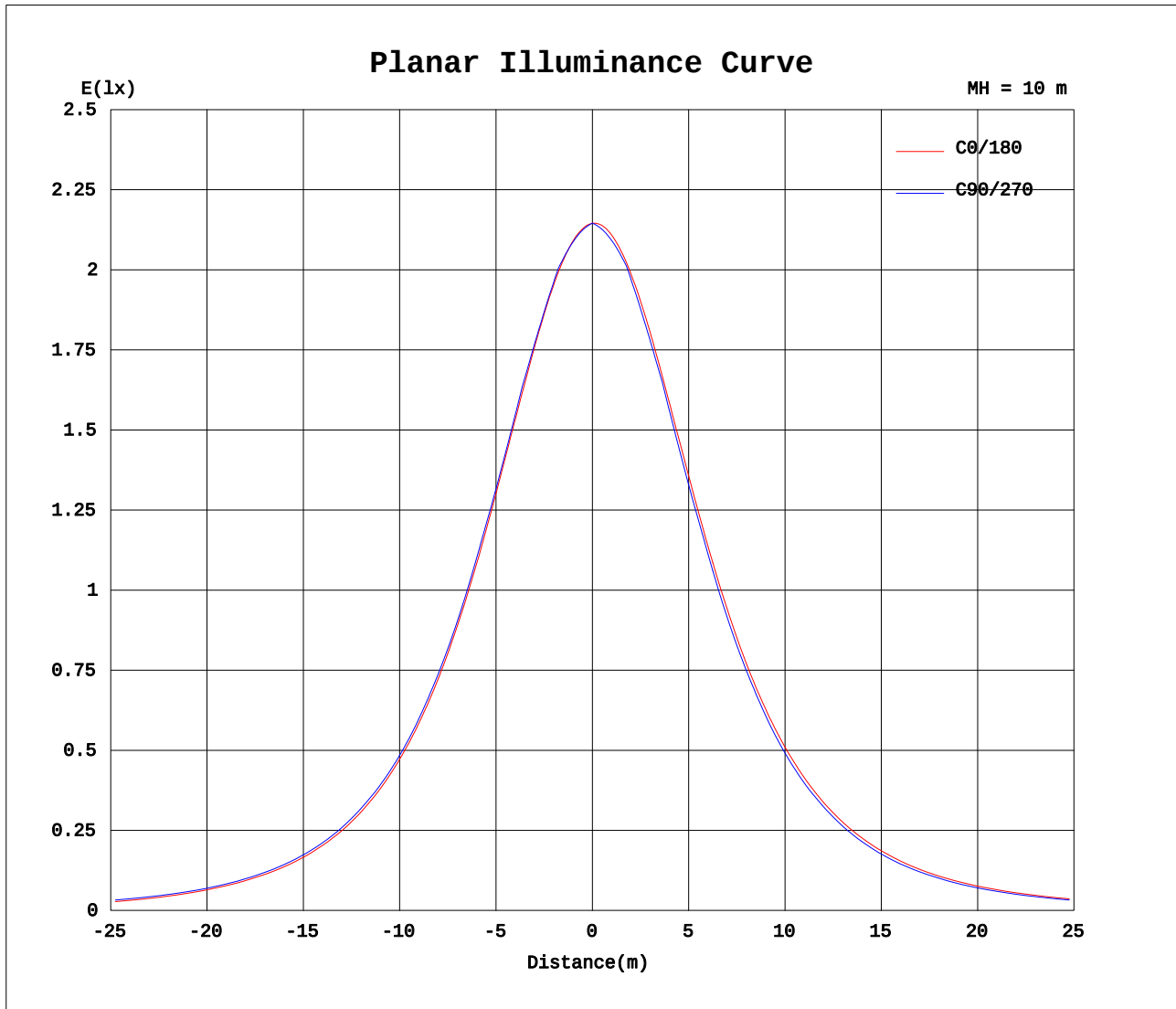
AvgL	cd/m2
L_0~180(65)av	39198
L_0~180(75)av	28553
L_0~180(85)av	3495
L_90~270(65)av	39296
L_90~270(75)av	35495
L_90~270(85)av	0
L_45(65)av	39413
L_45(75)av	32703
L_45(85)av	9412

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:
```