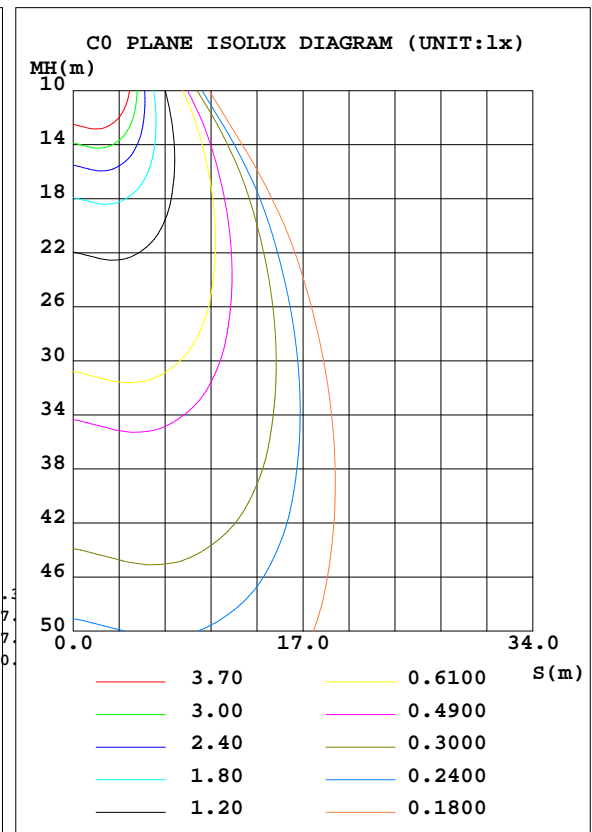
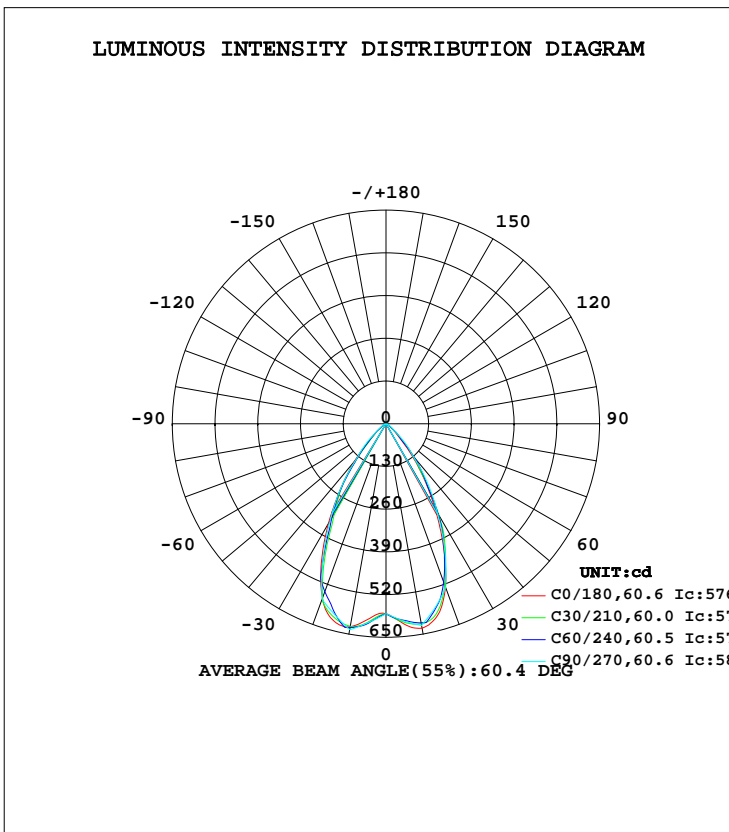


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 81.58 lm/W			
MODEL	11202P430E39 3000K	I _{max} (cd)	637.5	S/MH(C0/180)	0.96
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.96
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	643.20	η UP, DN(C0-180)	0.0,48.9
NOMINAL FLUX(lm)	643.2	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,51.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	0.95



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

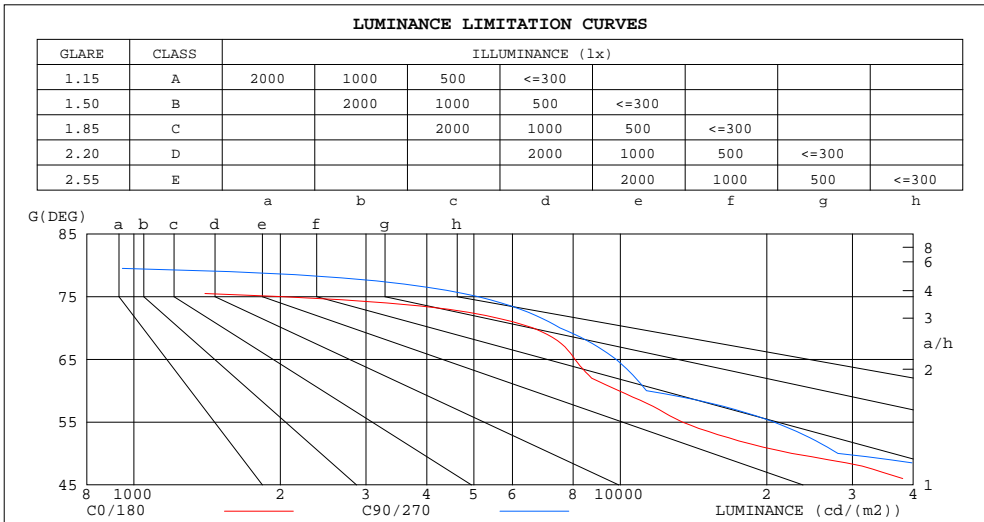
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	631.7	614.1	623.3	623.1	627.3	627.6	636.7	628.7	0- 10	58.46	58.46	9.09,9.09
20	529.3	526.3	531.0	515.1	565.6	529.7	568.7	553.9	10- 20	167.1	225.6	35.1,35.1
30	299.5	310.0	313.4	323.0	350.4	337.5	339.6	328.6	20- 30	198.0	423.6	65.9,65.9
40	113.3	123.4	127.6	137.4	150.2	147.2	139.0	128.5	30- 40	137.8	561.4	87.3,87.3
50	25.04	27.83	31.15	33.66	36.46	36.17	32.77	28.39	40- 50	55.92	617.3	96,96
60	8.583	9.734	9.786	10.39	11.28	10.72	10.30	10.03	50- 60	16.40	633.7	98.5,98.5
70	3.914	4.233	4.448	4.174	5.083	4.790	5.065	4.778	60- 70	6.918	640.6	99.6,99.6
80	0.0825	0.5493	0.0785	0.3765	0.0707	0.9022	0.5262	1.098	70- 80	2.386	643.0	100,100
90	0.0785	0	0	0	0.0707	0	0	0	80- 90	0.1675	643.2	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:2019-10-10

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

LUMINANCE LIMITATION CURVES

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	521	0
80	275	261
75	2000	5091
70	6615	7518
65	8067	9796
60	9923	11313
55	13407	20684
50	22514	28009
45	42674	64843

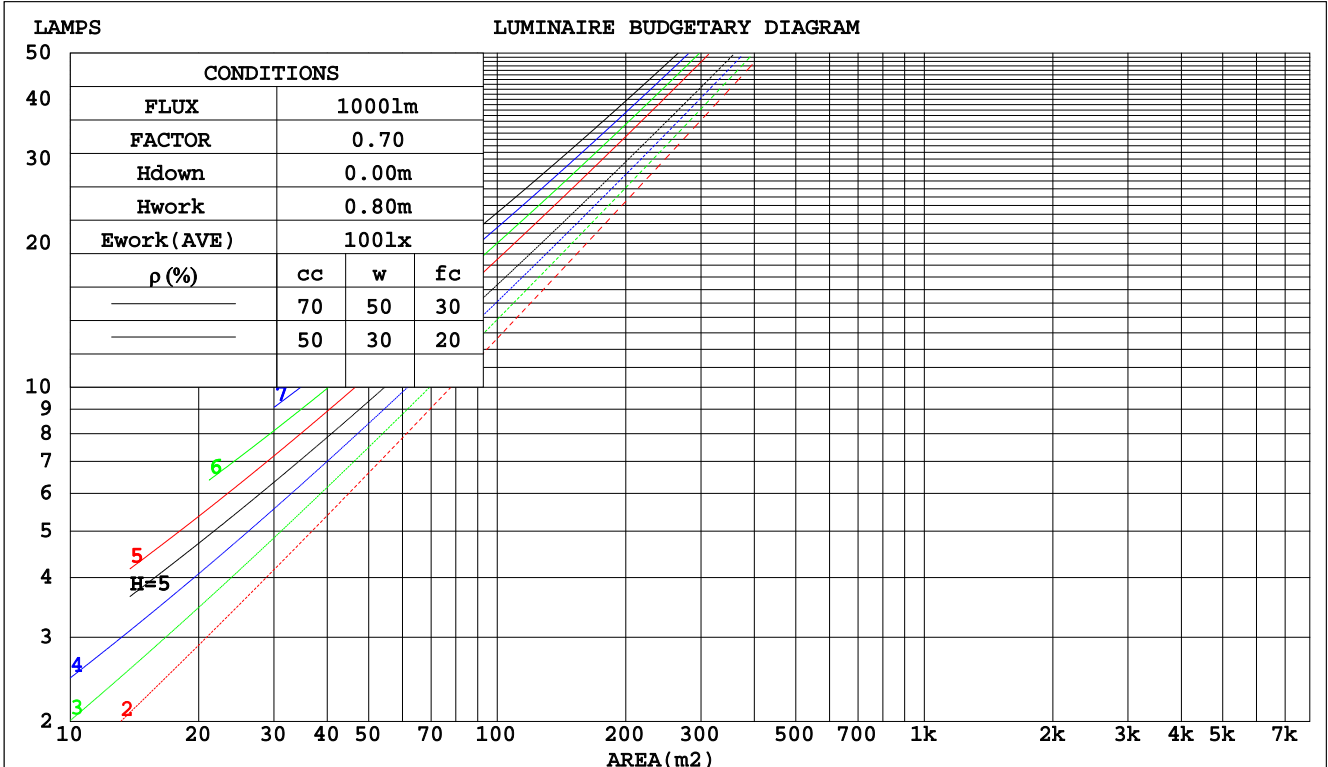
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-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:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0		
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0		
pw	0																	
pfc	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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93		
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.86		
3.0	.95	.89	.85	.93	.88	.84	.91	.86	.83	.88	.85	.82	.86	.83	.81	.79		
4.0	.88	.82	.78	.87	.81	.77	.85	.80	.76	.83	.79	.75	.81	.77	.74	.73		
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.67		
6.0	.77	.70	.66	.76	.70	.65	.74	.69	.65	.73	.68	.65	.71	.67	.64	.63		
7.0	.72	.65	.61	.71	.65	.61	.70	.64	.60	.68	.64	.60	.67	.63	.60	.58		
8.0	.67	.61	.57	.67	.61	.57	.66	.60	.56	.64	.60	.56	.63	.59	.56	.54		
9.0	.63	.57	.53	.63	.57	.53	.62	.56	.53	.61	.56	.52	.60	.56	.52	.51		
10.0	.60	.54	.50	.59	.53	.50	.58	.53	.49	.58	.53	.49	.57	.52	.49	.48		



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

WEC AND CCEC

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.187	.107	.034	.181	.103	.033	.168	.096	.031	.156	.090	.029	.146	.084	.027	
2.0	.181	.099	.030	.175	.096	.030	.164	.091	.028	.154	.087	.027	.145	.082	.026	
3.0	.172	.092	.027	.168	.090	.027	.158	.086	.026	.150	.082	.025	.142	.079	.024	
4.0	.164	.085	.025	.160	.084	.025	.152	.081	.024	.145	.078	.023	.138	.075	.023	
5.0	.156	.080	.023	.153	.078	.023	.146	.076	.022	.139	.073	.022	.133	.071	.021	
6.0	.149	.075	.021	.146	.074	.021	.140	.072	.021	.134	.070	.020	.129	.068	.020	
7.0	.142	.070	.020	.139	.069	.020	.134	.068	.020	.129	.066	.019	.124	.064	.019	
8.0	.136	.066	.019	.133	.066	.019	.128	.064	.018	.124	.063	.018	.120	.061	.018	
9.0	.130	.063	.018	.128	.062	.017	.123	.061	.017	.119	.060	.017	.115	.059	.017	
10.0	.125	.060	.017	.122	.059	.016	.118	.058	.016	.115	.057	.016	.111	.056	.016	

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.111	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.054	.050	.040	.032	.016	.013	.010	
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.051	.075	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.120	.078	.048	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.103	.060	.030	.089	.052	.027	.062	.036	.019	.036	.022	.011	.012	.007	.004	
10.0	.099	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

UGR(Unified Glare Rating) Table

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm										
NAME: EDL110-1 WW BK					TYPE:			WEIGHT:		
SPEC.:10W					DIM.:			SERIAL No.:		
MFR.: OBALS					SUR.:47mm			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	23.4	24.4	23.6	24.6	24.7	23.7	24.7	23.9	24.9	25.1
3H	23.3	24.2	23.6	24.4	24.7	23.6	24.6	23.9	24.8	25.0
4H	23.2	24.1	23.5	24.3	24.6	23.6	24.5	23.9	24.7	24.9
6H	23.2	24.0	23.5	24.2	24.5	23.5	24.3	23.8	24.6	24.8
8H	23.1	23.9	23.4	24.2	24.4	23.5	24.2	23.8	24.5	24.8
12H	23.1	23.8	23.4	24.1	24.4	23.4	24.2	23.7	24.4	24.7
4H 2H	23.2	24.1	23.5	24.3	24.5	23.5	24.4	23.8	24.6	24.8
3H	23.2	23.9	23.5	24.2	24.5	23.5	24.2	23.8	24.5	24.8
4H	23.1	23.8	23.5	24.1	24.4	23.4	24.1	23.8	24.4	24.7
6H	23.0	23.6	23.4	23.9	24.3	23.4	24.0	23.7	24.3	24.6
8H	23.0	23.5	23.4	23.9	24.2	23.3	23.9	23.7	24.2	24.6
12H	22.9	23.4	23.3	23.8	24.2	23.3	23.8	23.7	24.1	24.5
8H 4H	23.0	23.5	23.4	23.9	24.3	23.3	23.9	23.7	24.2	24.6
6H	22.9	23.3	23.3	23.7	24.2	23.2	23.7	23.7	24.1	24.5
8H	22.8	23.2	23.3	23.7	24.1	23.2	23.6	23.6	24.0	24.4
12H	22.8	23.1	23.3	23.6	24.0	23.1	23.5	23.6	23.9	24.4
12H 4H	22.9	23.4	23.3	23.8	24.2	23.3	23.8	23.7	24.1	24.5
6H	22.8	23.2	23.3	23.7	24.1	23.2	23.6	23.6	24.0	24.4
8H	22.8	23.1	23.3	23.6	24.0	23.1	23.5	23.6	23.9	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.5 / - 7.0					+ 2.4 / - 5.7				
1.5H	+ 4.0 / - 5.4					+ 3.9 / - 6.0				
2.0H	+ 5.0 / - 4.3					+ 5.4 / - 5.1				

CIE Pub.117, 643.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.5)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

UTILIZATION FACTORS TABLE

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

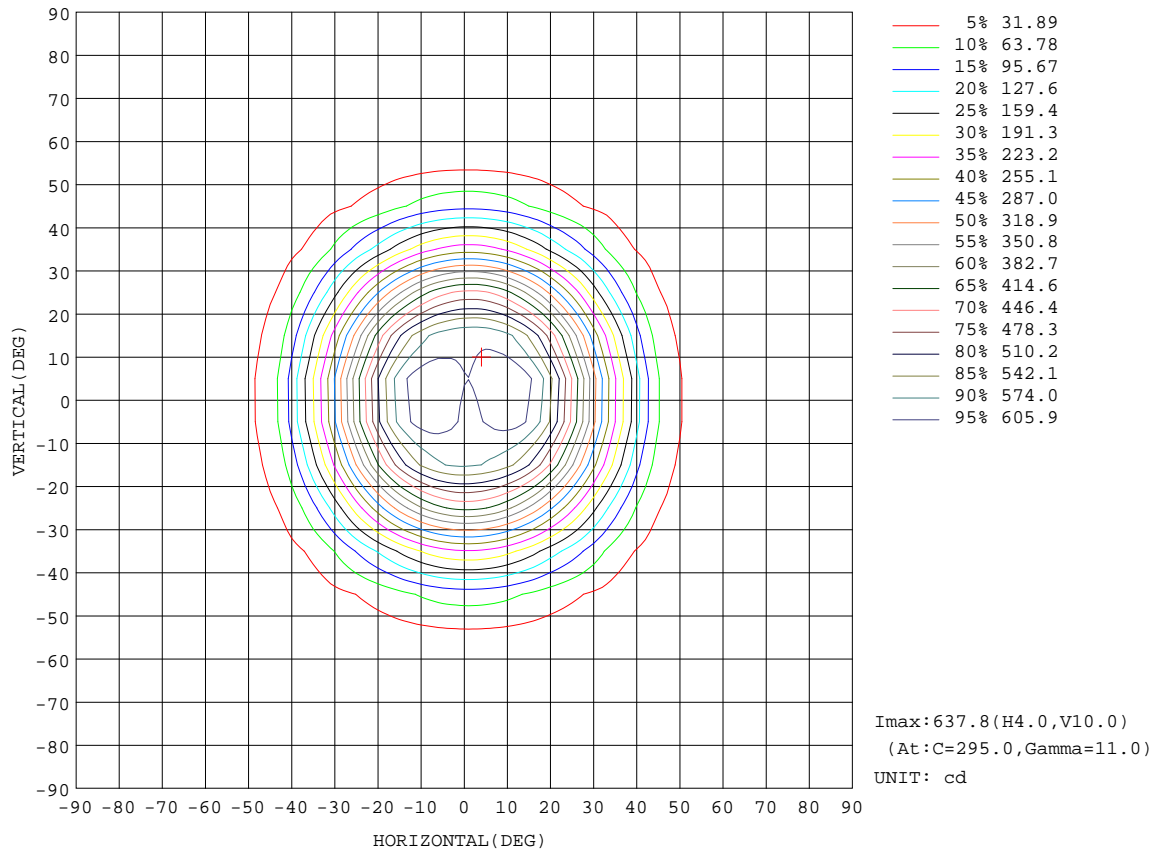
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	76	72	83	76	72	82	76	72	68
0.80	92	85	81	91	85	81	90	84	80	76
1.00	97	91	87	96	90	86	94	90	86	82
1.25	101	96	92	100	95	91	98	94	91	86
1.50	104	99	95	103	98	95	101	97	94	89
2.00	107	103	99	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	104	101	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	108	106	107	105	104	96
5.00	114	112	110	112	110	108	108	107	105	97
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:2019-10-10

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

ISOCANDELA DIAGRAM

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

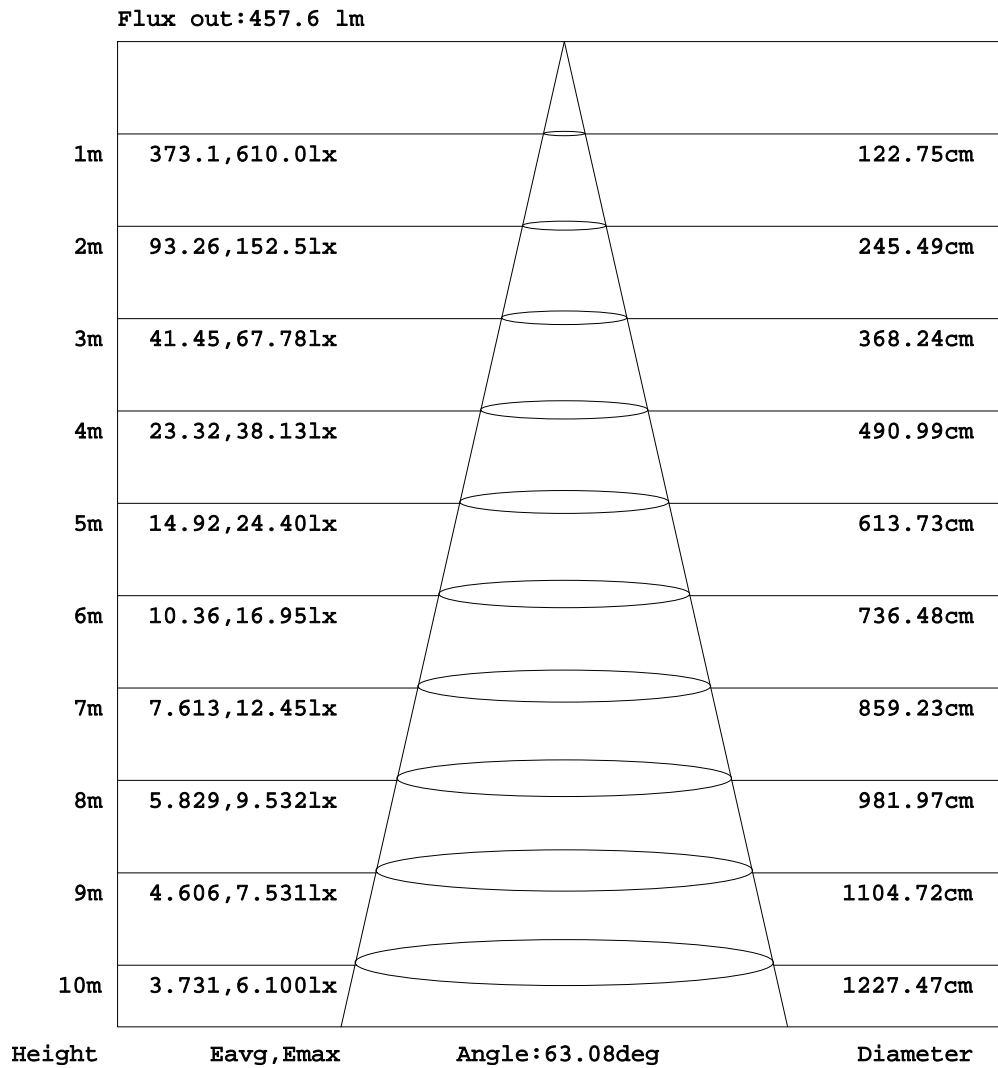


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

AAI Figure

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



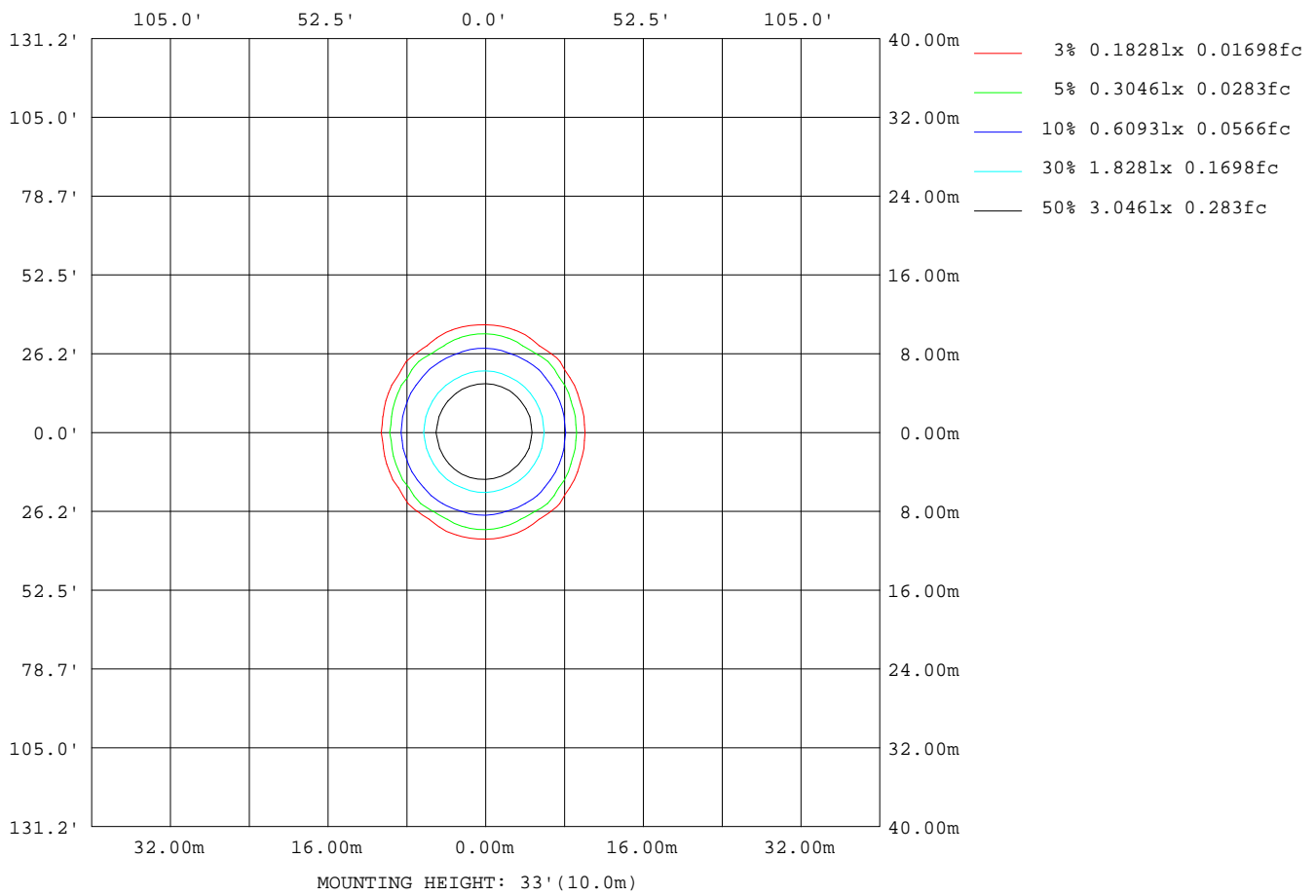
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

ISOLUX DIAGRAM

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

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

LED Avg.L Report

Test:U:219.97V I:0.0375A P:7.8838W PF:0.9545 Freq:50.01Hz Lamp Flux:643.2x1 lm		
NAME: EDL110-1 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

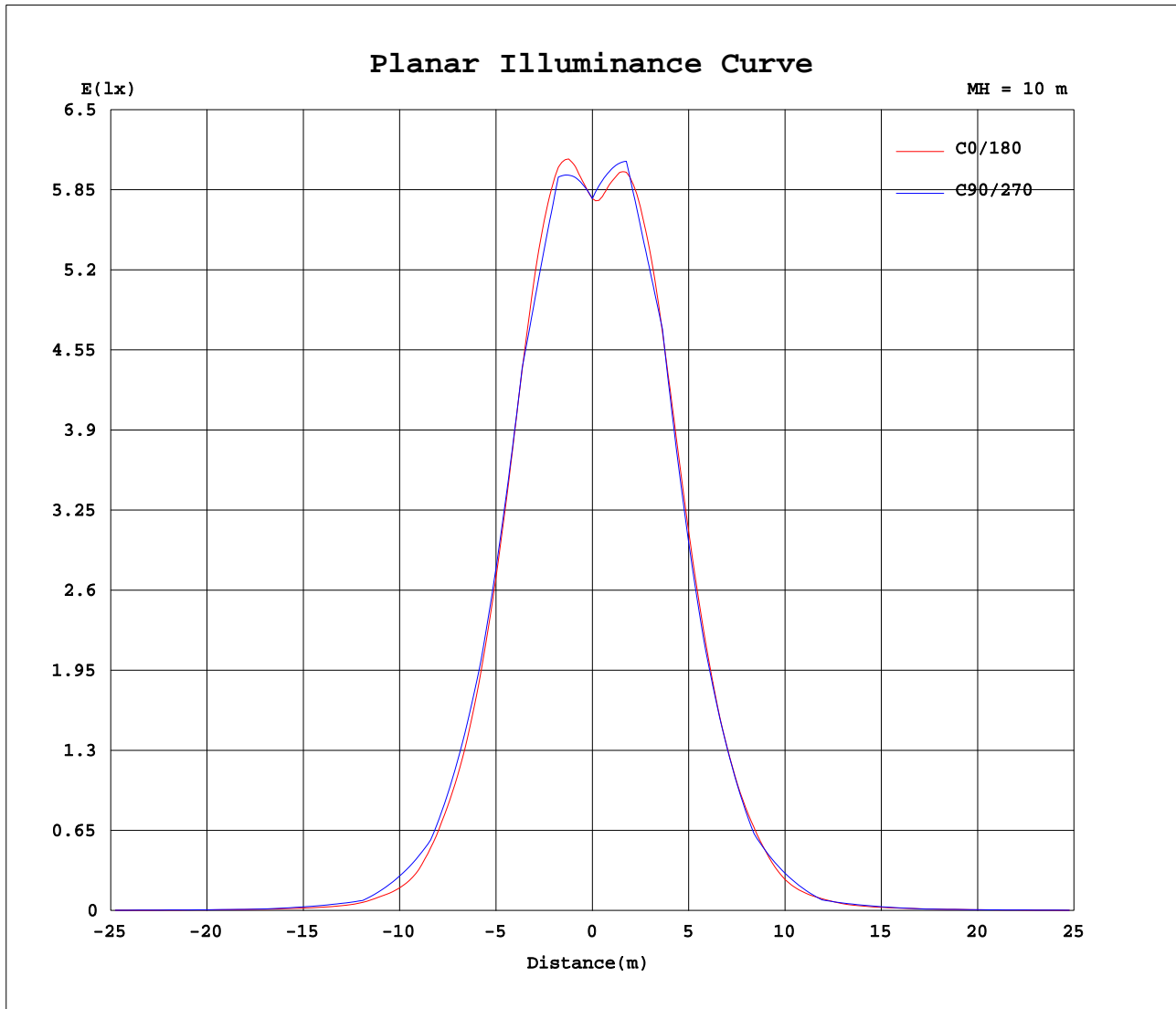
AvgL	cd/m2
L_0~180(65)av	8890
L_0~180(75)av	3717
L_0~180(85)av	495
L_90~270(65)av	10152
L_90~270(75)av	5663
L_90~270(85)av	0
L_45(65)av	9686
L_45(75)av	4144
L_45(85)av	826

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-10-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-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:2019-10-10

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

