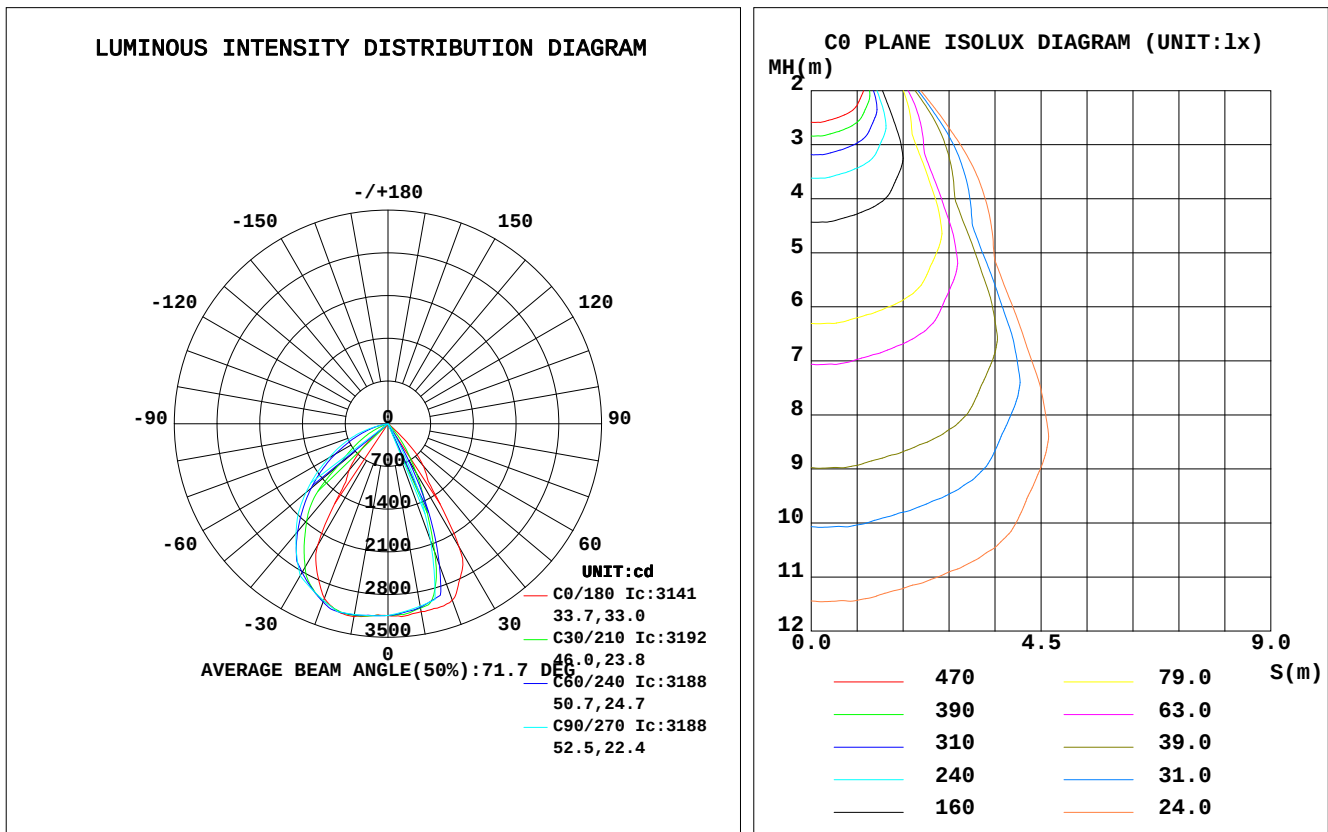


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 53.91 lm/W			
MODEL	490229 BODACIOUS	I _{max} (cd)	3211	S/MH(C0/180)	0.98
NOMINAL POWER(W)	12	LOR(%)	297.3	S/MH(C90/270)	1.32
RATED VOLTAGE(V)	12	TOTAL FLUX(lm)	4458.9	η UP, DN(C0-180)	0.0, 72.1
NOMINAL FLUX(lm)	1500	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 225.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	12	η down(%)	297.3	CIBSE SHR MAX	0.95



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [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
5	3161	3117	3088	3105	3158	3155	3157	3168	0- 5	75.05	75.05	1.68,5
10	3126	3050	3035	3072	3208	3184	3172	3170	5- 10	224.1	299.1	6.71,19.9
15	3127	2981	2981	2866	3176	3175	3188	3153	10- 15	367.5	666.7	15,44.4
20	3076	2523	2042	2287	3046	3123	3084	3137	15- 20	479.3	1146	25.7,76.4
25	2797	1414	1103	1300	2731	2900	2900	3016	20- 25	520.7	1667	37.4,111
30	2325	662.2	163.7	665.1	2307	2773	2876	2836	25- 30	511.8	2178	48.9,145
35	1150	275.6	109.4	283.7	1312	2518	2611	2626	30- 35	466.2	2644	59.3,176
40	895.6	7.107	55.21	15.84	993.5	2220	2345	2351	35- 40	418.6	3063	68.7,204
45	504.2	5.844	0.9761	14.42	678.2	1874	2080	1975	40- 45	366.2	3429	76.9,229
50	95.20	3.421	0.6598	11.17	274.4	1522	1757	1540	45- 50	305.4	3735	83.8,249
55	37.19	0.0004	0.3434	6.409	54.77	1173	1434	975.4	50- 55	243.3	3978	89.2,265
60	31.58	0	0.0271	4.040	36.00	756.0	1111	681.8	55- 60	184.2	4162	93.3,277
65	23.77	0	0.0813	1.512	28.36	467.3	847.0	433.4	60- 65	131.4	4294	96.3,286
70	15.15	0.0100	0.1355	0.0841	20.72	269.3	582.7	232.8	65- 70	88.58	4382	98.3,292
75	7.682	0.0334	0.1897	0.1544	13.83	131.6	318.5	106.9	70- 75	53.26	4435	99.5,296
80	1.994	0.0434	0	0.1735	8.247	28.08	0	28.62	75- 80	21.04	4456	99.9,297
85	0	0	0	0	4.047	0	0	0	80- 85	2.216	4459	100,297
90	0	0	0	0	1.163	0	0	0	85- 90	0.2026	4459	100,297
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

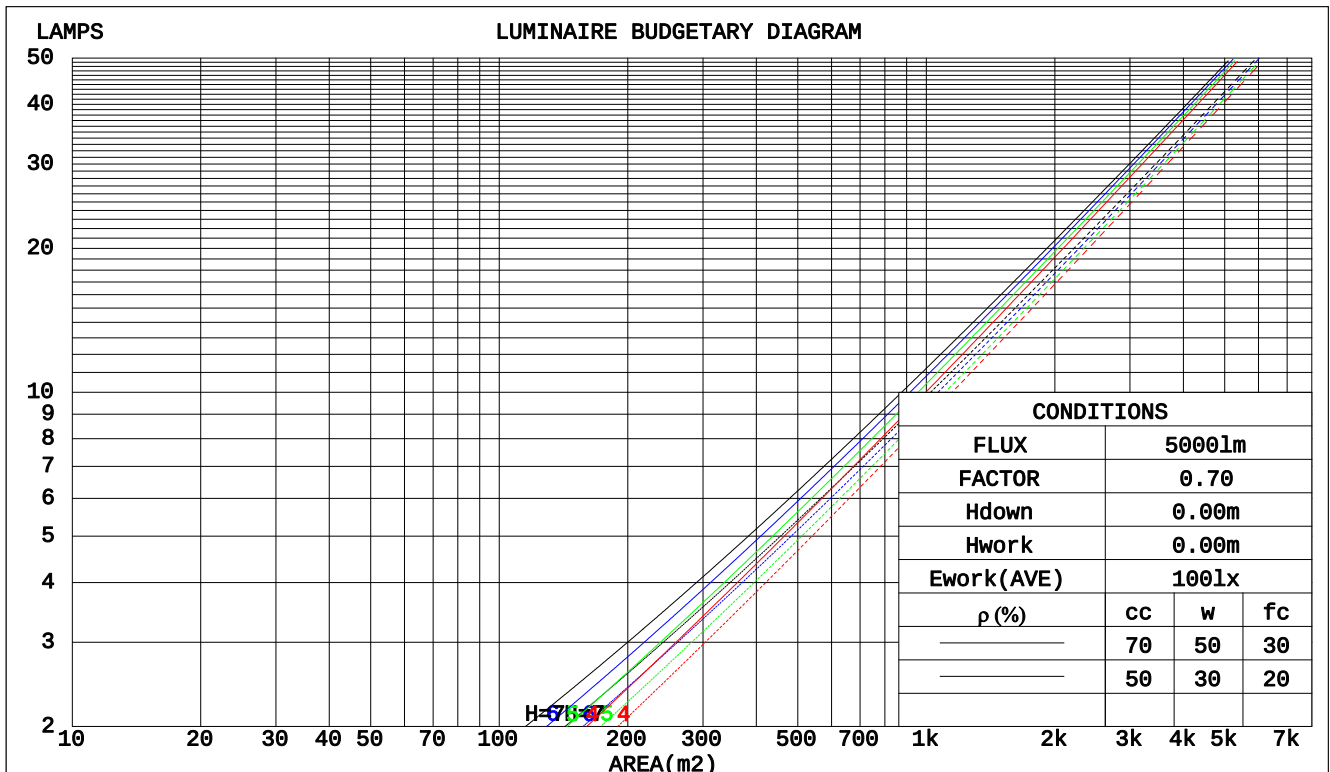
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION 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	3.54	3.54	3.54	3.46	3.46	3.46	3.30	3.30	3.30	3.16	3.16	3.16	3.03	3.03	3.03	2.97
1.0	3.22	3.13	3.04	3.16	3.07	3.00	3.03	2.96	2.90	2.92	2.87	2.81	2.82	2.77	2.73	2.68
2.0	2.92	2.76	2.64	2.86	2.72	2.60	2.76	2.65	2.55	2.67	2.57	2.49	2.59	2.51	2.44	2.38
3.0	2.65	2.46	2.31	2.60	2.43	2.29	2.52	2.37	2.25	2.45	2.32	2.22	2.38	2.27	2.18	2.13
4.0	2.42	2.21	2.05	2.38	2.19	2.04	2.31	2.14	2.01	2.25	2.10	1.99	2.19	2.06	1.96	1.91
5.0	2.21	2.00	1.84	2.18	1.98	1.83	2.13	1.95	1.81	2.07	1.92	1.79	2.02	1.89	1.78	1.72
6.0	2.04	1.82	1.66	2.01	1.81	1.66	1.96	1.78	1.64	1.92	1.75	1.63	1.87	1.73	1.62	1.57
7.0	1.88	1.67	1.51	1.86	1.66	1.51	1.82	1.63	1.50	1.78	1.61	1.49	1.74	1.60	1.48	1.43
8.0	1.75	1.53	1.39	1.73	1.53	1.38	1.69	1.51	1.38	1.66	1.49	1.37	1.63	1.48	1.36	1.31
9.0	1.63	1.42	1.28	1.61	1.41	1.28	1.58	1.40	1.27	1.55	1.39	1.27	1.53	1.37	1.26	1.21
10.0	1.52	1.32	1.19	1.51	1.31	1.18	1.48	1.30	1.18	1.46	1.29	1.17	1.43	1.28	1.17	1.13



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm									
NAME: 490229 BODACIOUS					TYPE:490229 BODACIOUS			WEIGHT:	
SPEC.:					DIM.:			SERIAL No.:	
MFR.:					SUR.:			PROTECTION 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	.666	.379	.120	.646	.369	.117	.608	.349	.111	.573	.330	.106	.541	.313	.101		
2.0	.649	.355	.109	.631	.348	.107	.598	.333	.103	.568	.319	.100	.540	.305	.096		
3.0	.617	.328	.098	.602	.322	.097	.573	.311	.094	.547	.300	.092	.523	.289	.090		
4.0	.583	.303	.089	.570	.298	.088	.545	.289	.086	.522	.280	.085	.500	.272	.083		
5.0	.550	.280	.081	.539	.277	.081	.517	.269	.079	.496	.262	.078	.477	.255	.077		
6.0	.519	.260	.075	.509	.257	.074	.490	.251	.073	.471	.245	.072	.454	.239	.071		
7.0	.491	.243	.069	.482	.240	.068	.464	.235	.068	.448	.230	.067	.433	.225	.066		
8.0	.465	.227	.064	.456	.225	.064	.441	.220	.063	.426	.216	.062	.412	.212	.062		
9.0	.441	.213	.060	.433	.211	.059	.419	.207	.059	.406	.204	.058	.394	.200	.058		
10.0	.419	.201	.056	.412	.199	.056	.399	.196	.055	.387	.192	.055	.376	.189	.054		

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	.566	.566	.566	.484	.484	.484	.330	.330	.330	.190	.190	.190	.061	.061	.061	
1.0	.518	.466	.420	.444	.400	.361	.303	.275	.250	.175	.159	.145	.056	.051	.047	
2.0	.483	.393	.318	.414	.338	.275	.283	.234	.192	.163	.136	.112	.052	.044	.037	
3.0	.453	.339	.247	.389	.292	.214	.267	.203	.150	.154	.118	.089	.050	.038	.029	
4.0	.427	.297	.197	.367	.256	.171	.252	.179	.120	.146	.105	.071	.047	.034	.023	
5.0	.404	.264	.160	.347	.228	.139	.239	.160	.098	.139	.094	.058	.045	.031	.019	
6.0	.384	.238	.133	.330	.206	.116	.228	.144	.082	.132	.085	.049	.043	.028	.016	
7.0	.365	.216	.112	.314	.188	.098	.217	.131	.069	.126	.077	.041	.041	.025	.014	
8.0	.347	.199	.096	.299	.172	.084	.207	.121	.060	.120	.071	.036	.039	.023	.012	
9.0	.331	.184	.084	.285	.159	.073	.198	.112	.052	.115	.066	.031	.037	.022	.010	
10.0	.316	.171	.074	.273	.148	.065	.189	.104	.046	.110	.062	.027	.036	.020	.009	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm											
NAME: 490229 BODACIOUS					TYPE:490229 BODACIOUS			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:			PROTECTION 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	3H	7.4	8.6	7.7	8.8	9.0	-8.8	-7.6	-8.6	-7.4	-7.3
	4H	7.2	8.4	7.5	8.6	8.8	-9.0	-7.9	-8.7	-7.7	-7.5
	6H	7.2	8.2	7.5	8.4	8.7	-9.1	-8.1	-8.8	-7.8	-7.6
	8H	7.1	8.0	7.4	8.3	8.6	-9.2	-8.2	-8.9	-8.0	-7.7
	8H	7.0	8.0	7.3	8.2	8.5	-9.3	-8.3	-8.9	-8.1	-7.8
	12H	7.0	7.9	7.3	8.2	8.4	-9.3	-8.4	-9.0	-8.1	-7.8
4H	2H	7.1	8.2	7.4	8.4	8.6	-9.1	-8.0	-8.8	-7.8	-7.5
	3H	7.0	7.9	7.3	8.1	8.4	-9.3	-8.3	-8.9	-8.1	-7.8
	4H	6.9	7.7	7.2	8.0	8.3	-9.3	-8.5	-9.0	-8.2	-7.9
	6H	6.8	7.5	7.2	7.8	8.2	-9.4	-8.7	-9.1	-8.4	-8.0
	8H	6.7	7.4	7.1	7.8	8.1	-9.5	-8.8	-9.1	-8.5	-8.1
	12H	6.7	7.3	7.1	7.7	8.1	-9.5	-8.9	-9.1	-8.5	-8.1
8H	4H	6.7	7.4	7.1	7.8	8.1	-9.5	-8.8	-9.1	-8.5	-8.1
	6H	6.6	7.2	7.1	7.6	8.0	-9.6	-9.0	-9.1	-8.6	-8.2
	8H	6.6	7.1	7.0	7.5	7.9	-9.6	-9.1	-9.2	-8.7	-8.3
	12H	6.5	7.0	7.0	7.4	7.9	-9.7	-9.3	-9.2	-8.8	-8.3
12H	4H	6.7	7.3	7.1	7.7	8.1	-9.5	-8.9	-9.1	-8.5	-8.1
	6H	6.6	7.1	7.0	7.5	7.9	-9.6	-9.1	-9.2	-8.7	-8.3
	8H	6.5	7.0	7.0	7.4	7.9	-9.7	-9.3	-9.2	-8.8	-8.3
Variations with the observer position at spacings:											
S = 1.0H		+ 6.3 / -13.4					+ 5.4 / -23.9				
1.5H		+ 8.0 / -20.6					+ 8.1 / -23.0				
2.0H		+11.6 / -34.9					+ 4.4 / - 3.1				

CIE Pub.117 Corrected 1500 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.4)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

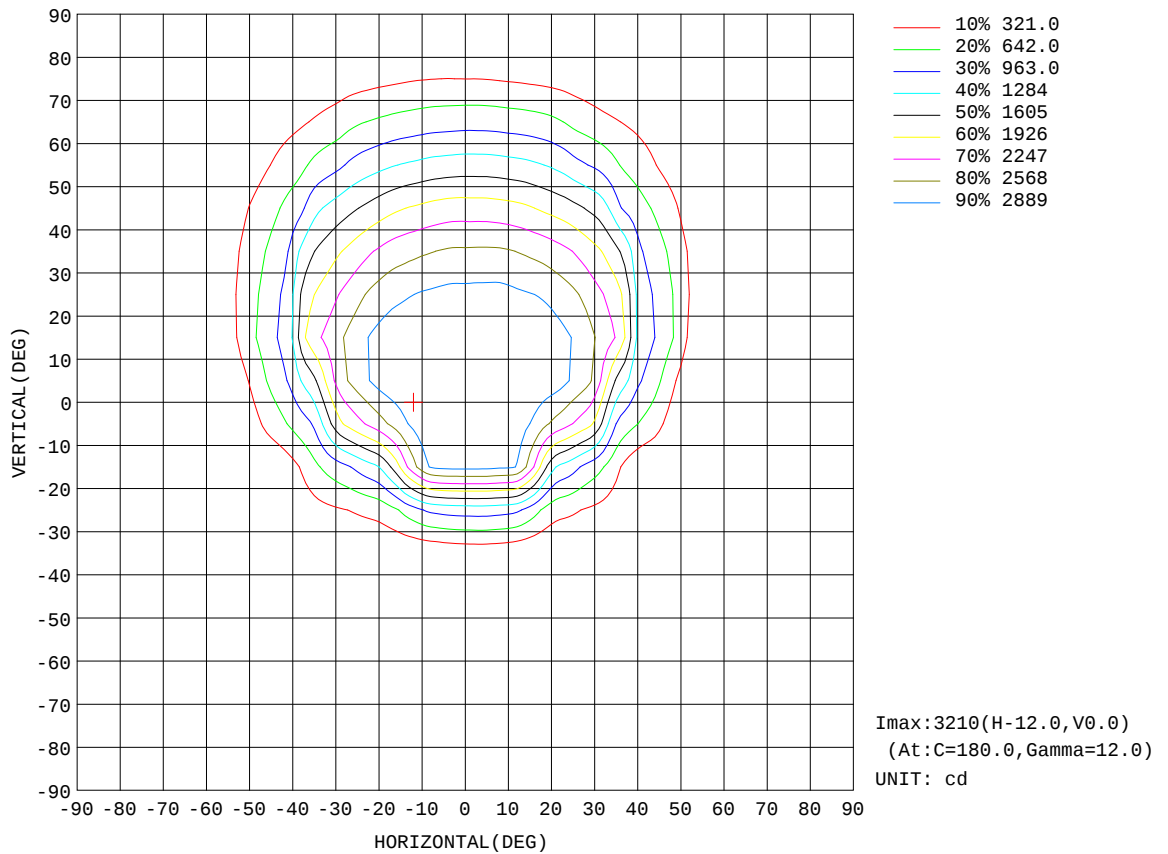
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	213	186	170	211	186	170	208	184	169	154
0.80	241	215	199	239	214	198	234	212	197	181
1.00	262	238	222	259	236	221	254	238	220	203
1.25	280	257	242	276	255	241	269	251	238	222
1.50	291	271	256	287	268	254	280	263	251	234
2.00	306	288	275	301	285	272	292	279	268	249
2.50	314	297	285	308	294	282	298	286	277	256
3.00	321	306	295	315	302	292	304	294	285	264
4.00	329	317	308	323	312	304	311	303	296	272
5.00	334	324	316	327	319	311	315	308	302	278
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:20DEG
 Operators:Y
 Test Date:2025-04-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.750m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

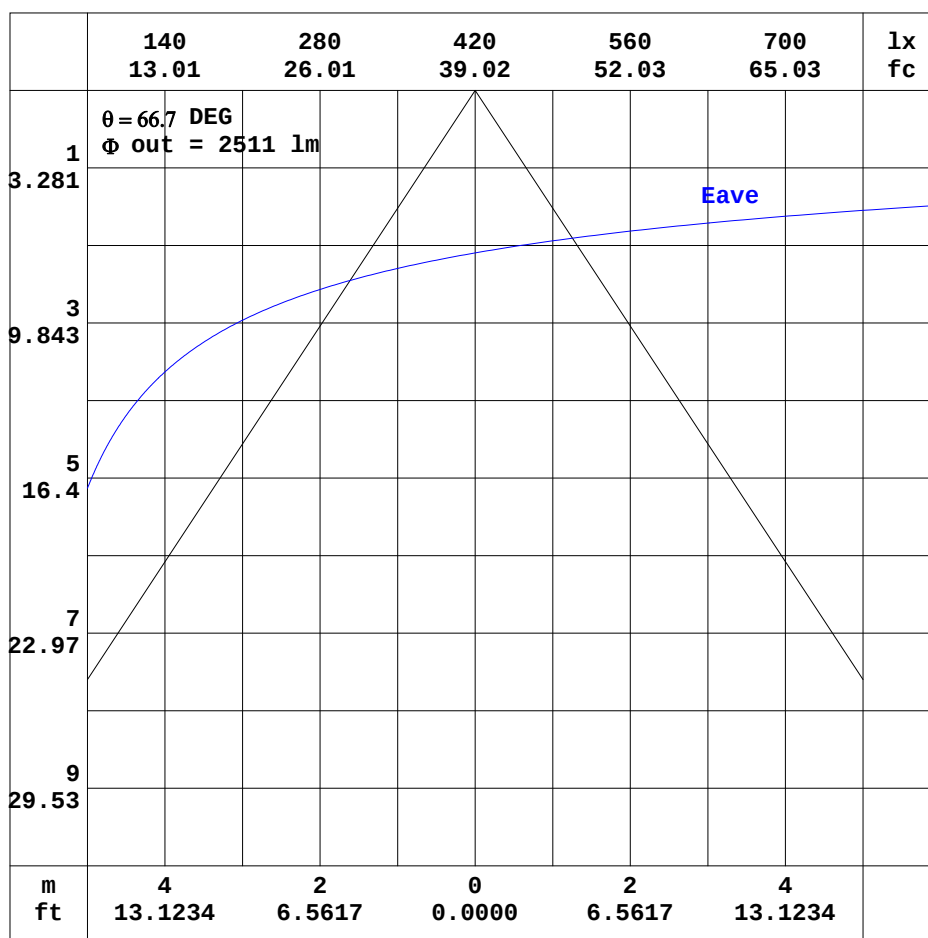


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: Y
Test Date: 2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity: 65.0%
Test Distance: 8.750m [K=1.0000]
Remarks:

AAI CURVES

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



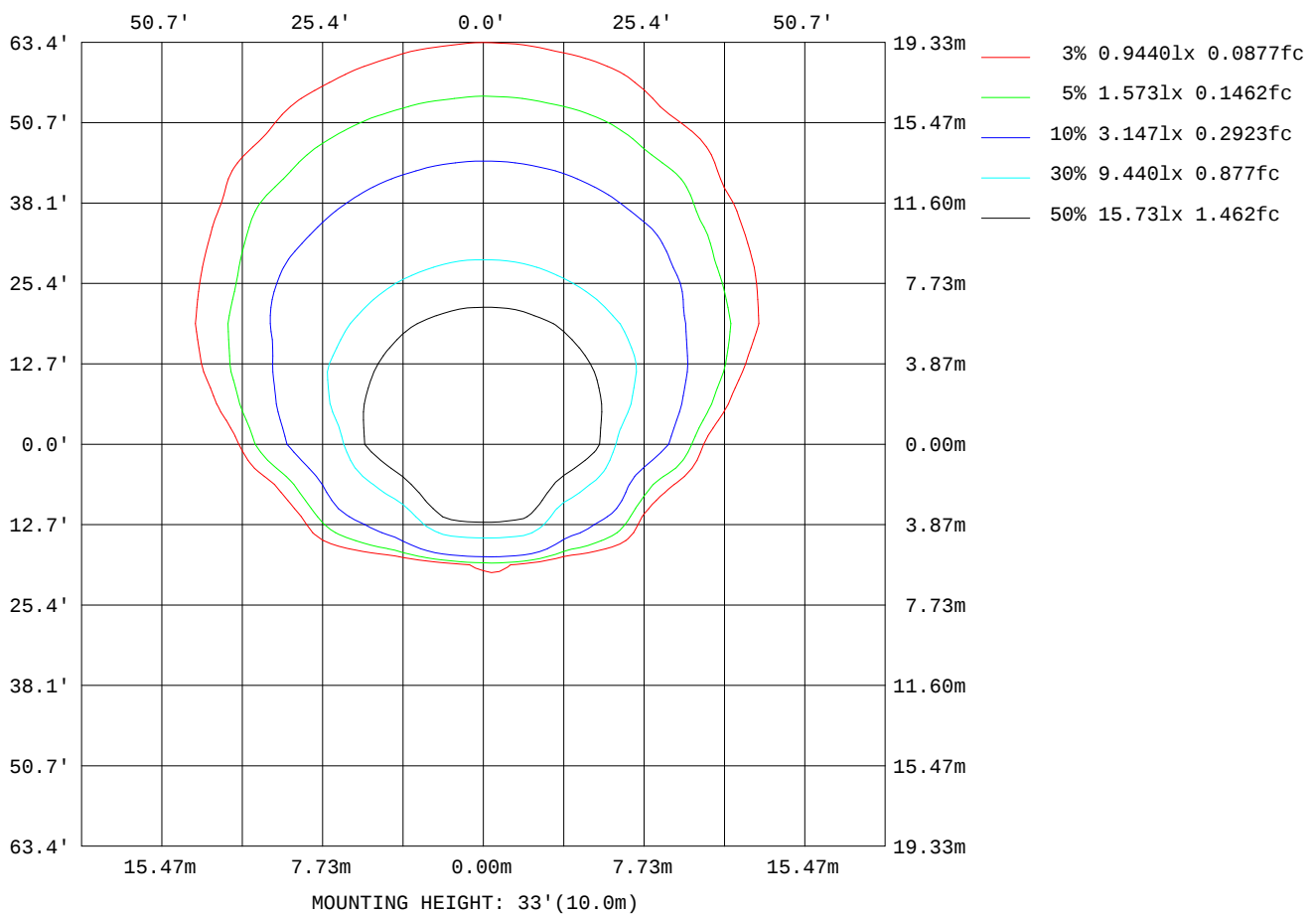
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

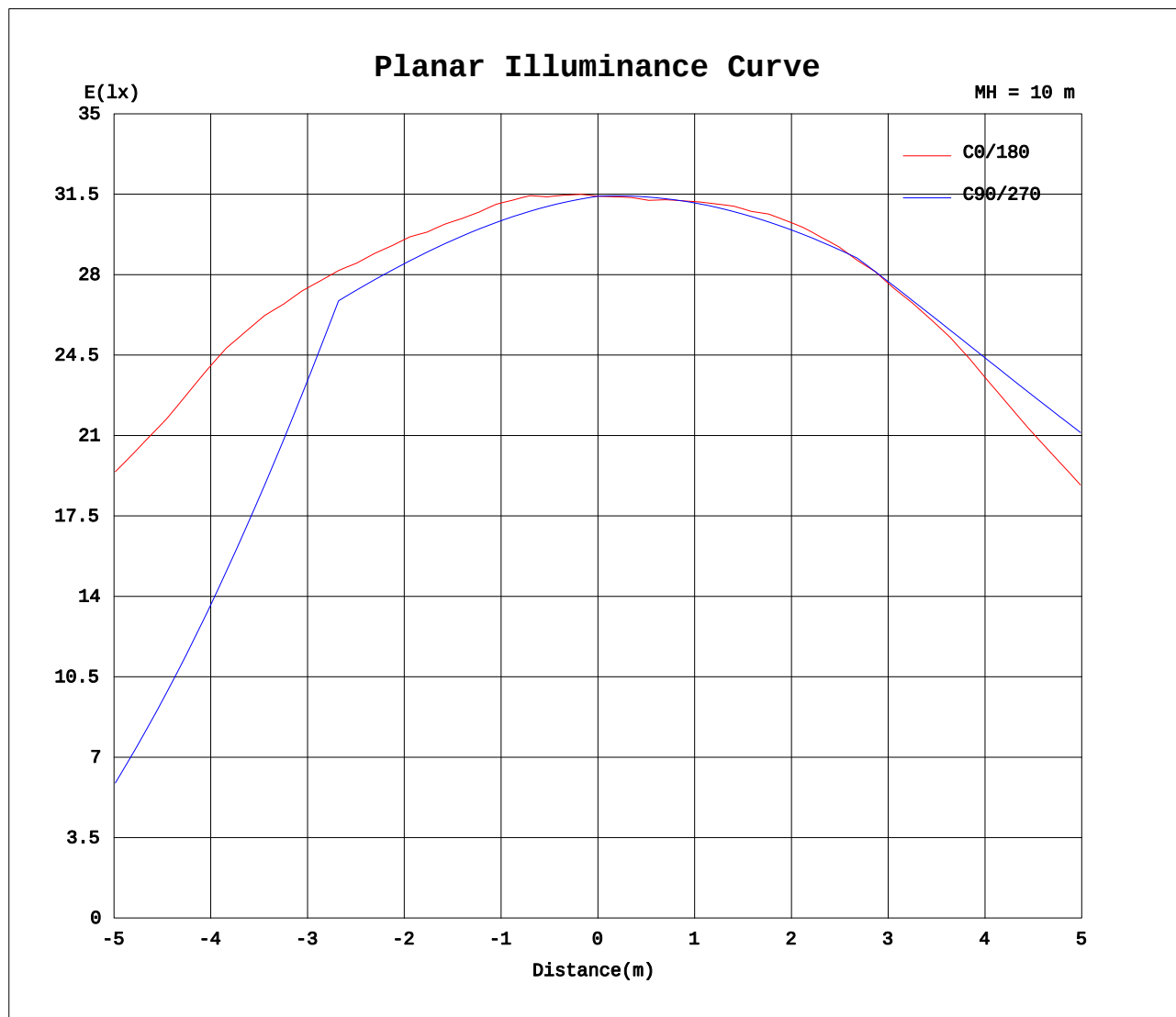
AvgL	cd/m2
L_0~180(65)av	308
L_0~180(75)av	208
L_0~180(85)av	116
L_90~270(65)av	5011
L_90~270(75)av	3078
L_90~270(85)av	0
L_45(65)av	2669
L_45(75)av	1153
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: Y
Test Date: 2025-04-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.291
Humidity: 65.0%
Test Distance: 8.750m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table - -1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: Y
Test Date: 2025-04-17

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table- -2

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: Y
Test Date: 2025-04-17

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table- -3

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: Y
Test Date: 2025-04-17

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:11.58V I:1.493A P:12.96W PF:0.7496 Lamp Flux:235x1 lm		
NAME: 490229 BODACIOUS	TYPE:490229 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table - -4

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: Y
Test Date: 2025-04-17

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

```