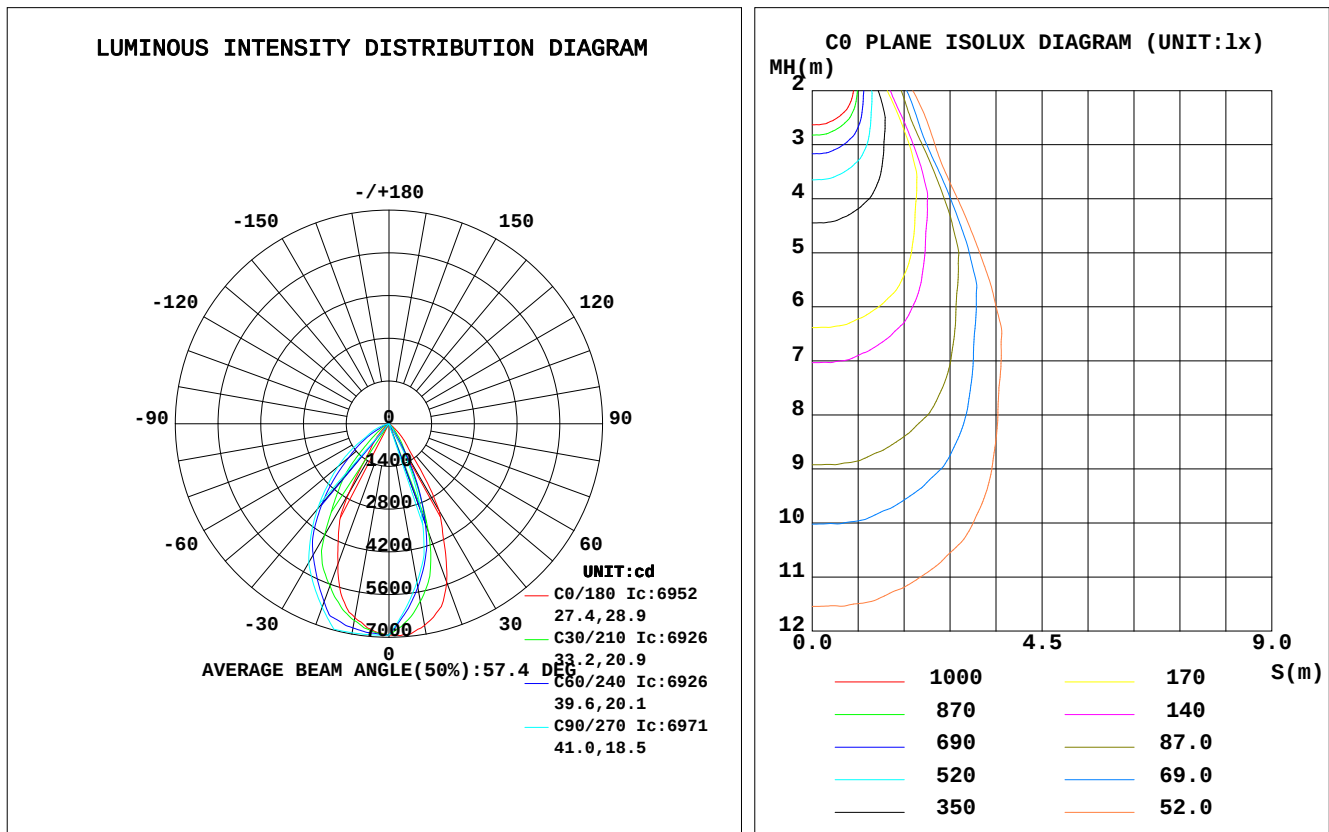


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.70 lm/W			
MODEL	490238 BODACIOUS	I _{max} (cd)	6971	S/MH(C0/180)	0.82
NOMINAL POWER(W)	16	LOR(%)	438.6	S/MH(C90/270)	1.15
RATED VOLTAGE(V)	12	TOTAL FLUX(lm)	6579.2	η UP, DN(C0-180)	0.0, 112.3
NOMINAL FLUX(lm)	1500	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 326.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	12	η down(%)	438.6	CIBSE SHR MAX	0.85



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	6932	6345	6102	6258	6759	6848	6941	6940	0- 5	160.9	160.9	2.45, 10.7
10	6709	5641	5277	5497	6452	6657	6956	6854	5- 10	458.7	619.6	9.42, 41.3
15	6314	4825	4452	4556	5915	6400	6971	6643	10- 15	707.3	1327	20.2, 88.5
20	5532	3757	3085	3032	4896	6045	6402	6325	15- 20	867.6	2195	33.4, 146
25	4256	2147	1717	1628	3918	5426	5833	5703	20- 25	894.8	3089	47, 206
30	3310	957.8	350.0	770.6	2663	4712	5264	4986	25- 30	831.8	3921	59.6, 261
35	1672	338.6	234.1	310.1	1174	3824	4455	4176	30- 35	708.5	4630	70.4, 309
40	886.1	21.70	118.1	24.07	747.5	2913	3645	3235	35- 40	581.9	5212	79.2, 347
45	545.3	15.44	2.109	18.16	419.5	2091	2836	2287	40- 45	456.6	5608	86.2, 378
50	236.5	9.864	1.581	11.47	170.2	1385	2179	1571	45- 50	336.9	6005	91.3, 400
55	72.30	3.680	0.9940	4.011	60.31	720.3	1523	886.2	50- 55	236.6	6242	94.9, 416
60	42.52	1.992	0.4064	2.332	39.66	375.9	867.3	466.1	55- 60	151.6	6393	97.2, 426
65	33.25	0.8376	0.5690	1.032	30.45	195.5	614.1	241.3	60- 65	87.65	6481	98.5, 432
70	24.07	0.4461	0.7316	0.5134	21.32	104.4	360.9	126.3	65- 70	53.92	6535	99.3, 436
75	15.32	0.5965	0.8942	0.7022	13.08	64.78	107.8	77.23	70- 75	29.85	6565	99.8, 438
80	8.059	0.5855	0	0.7187	6.732	30.84	0	33.99	75- 80	11.67	6576	100, 438
85	2.292	0	0	0	2.123	0	0	0	80- 85	2.582	6579	100, 439
90	0	0	0	0	0.0434	0	0	0	85- 90	0.2600	6579	100, 439
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		

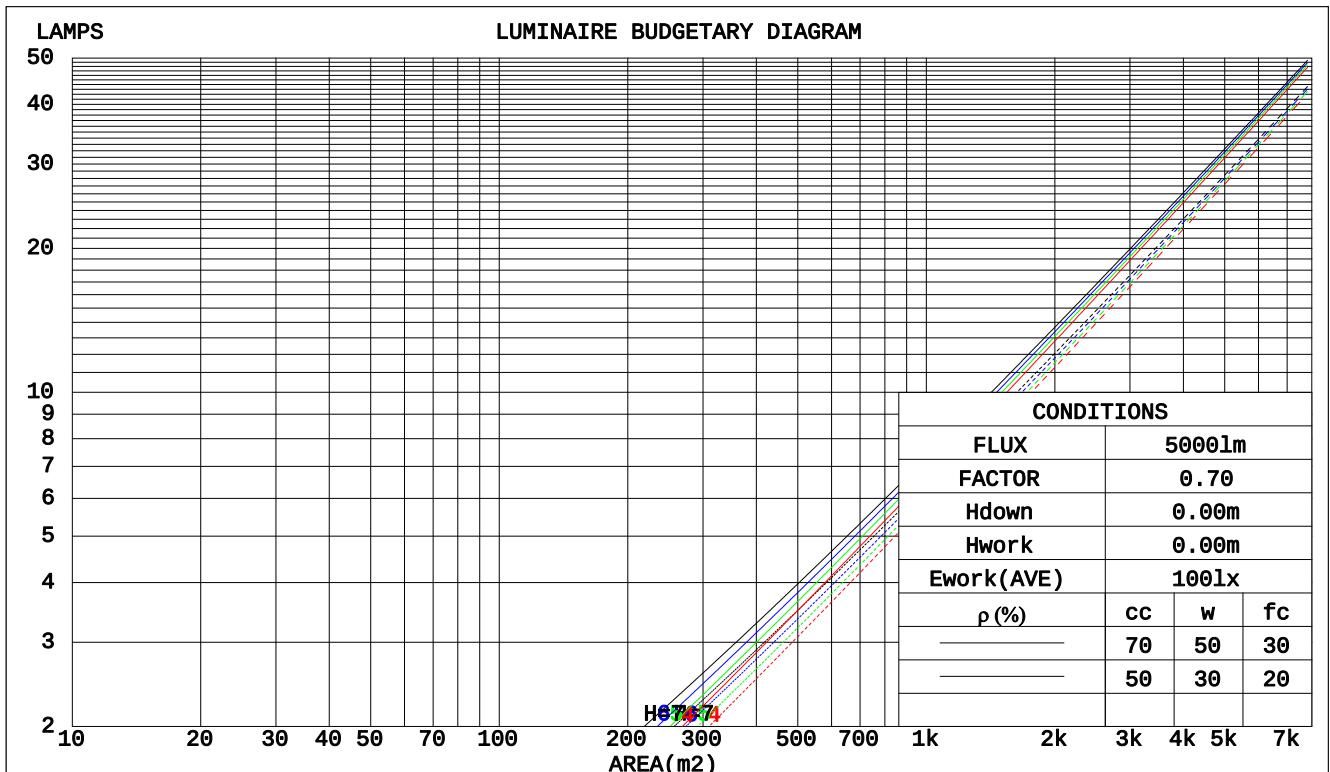
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 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	5.22	5.22	5.22	5.10	5.10	5.10	4.87	4.87	4.87	4.67	4.67	4.67	4.48	4.48	4.48	4.39
1.0	4.81	4.69	4.58	4.71	4.60	4.51	4.53	4.45	4.37	4.37	4.30	4.24	4.22	4.16	4.11	4.03
2.0	4.42	4.22	4.05	4.34	4.16	4.01	4.20	4.05	3.92	4.06	3.94	3.83	3.94	3.84	3.75	3.68
3.0	4.07	3.82	3.63	4.01	3.78	3.60	3.89	3.70	3.54	3.78	3.62	3.48	3.68	3.54	3.43	3.35
4.0	3.76	3.49	3.28	3.71	3.45	3.26	3.61	3.39	3.22	3.52	3.33	3.18	3.43	3.28	3.14	3.07
5.0	3.48	3.20	2.99	3.44	3.17	2.97	3.36	3.13	2.95	3.28	3.08	2.92	3.21	3.04	2.89	2.82
6.0	3.24	2.95	2.74	3.20	2.93	2.73	3.14	2.89	2.71	3.07	2.86	2.69	3.01	2.82	2.67	2.60
7.0	3.02	2.73	2.53	2.99	2.72	2.52	2.94	2.69	2.51	2.88	2.66	2.49	2.83	2.63	2.48	2.41
8.0	2.83	2.54	2.35	2.81	2.53	2.34	2.75	2.51	2.33	2.71	2.48	2.32	2.66	2.46	2.31	2.24
9.0	2.66	2.38	2.19	2.64	2.37	2.18	2.59	2.35	2.17	2.55	2.33	2.17	2.51	2.31	2.16	2.09
10.0	2.50	2.23	2.04	2.48	2.22	2.04	2.45	2.20	2.04	2.41	2.19	2.03	2.38	2.17	2.02	1.96



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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm														
NAME: 490238 BODACIOUS							TYPE:490238 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	.873	.497	.157	.844	.481	.153	.788	.452	.144	.737	.425	.136	.690	.400	.129	
2.0	.846	.464	.142	.821	.452	.139	.773	.430	.134	.730	.409	.128	.689	.390	.123	
3.0	.807	.430	.129	.785	.421	.127	.745	.403	.123	.707	.387	.119	.672	.372	.115	
4.0	.767	.398	.117	.748	.391	.116	.712	.378	.113	.679	.365	.110	.649	.352	.107	
5.0	.728	.371	.107	.711	.365	.106	.680	.354	.104	.651	.343	.102	.624	.333	.100	
6.0	.691	.346	.099	.676	.342	.098	.649	.332	.097	.623	.324	.095	.599	.315	.094	
7.0	.656	.325	.092	.644	.321	.091	.619	.313	.090	.596	.306	.089	.575	.298	.088	
8.0	.625	.305	.086	.613	.302	.085	.591	.295	.084	.571	.289	.083	.551	.283	.082	
9.0	.595	.288	.080	.585	.285	.080	.565	.279	.079	.547	.274	.078	.529	.269	.078	
10.0	.568	.272	.076	.559	.270	.075	.541	.265	.075	.524	.260	.074	.508	.256	.073	

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	.835	.835	.835	.714	.714	.714	.487	.487	.487	.280	.280	.280	.090	.090	.090	
1.0	.757	.689	.628	.648	.591	.540	.443	.407	.374	.255	.235	.217	.082	.076	.070	
2.0	.698	.581	.482	.597	.500	.417	.409	.346	.291	.236	.201	.170	.076	.065	.056	
3.0	.649	.499	.379	.556	.430	.329	.382	.299	.231	.221	.175	.136	.071	.057	.045	
4.0	.608	.436	.304	.521	.376	.264	.359	.262	.186	.207	.154	.110	.067	.050	.036	
5.0	.572	.386	.249	.491	.334	.217	.338	.233	.153	.196	.137	.091	.063	.045	.030	
6.0	.541	.346	.207	.465	.300	.180	.321	.210	.128	.186	.124	.076	.060	.040	.025	
7.0	.513	.314	.175	.441	.272	.153	.305	.191	.108	.177	.112	.064	.057	.037	.021	
8.0	.487	.287	.150	.420	.249	.131	.290	.175	.093	.169	.103	.055	.055	.034	.018	
9.0	.464	.265	.130	.400	.230	.114	.277	.162	.081	.161	.095	.048	.052	.031	.016	
10.0	.444	.246	.115	.382	.214	.100	.265	.150	.071	.155	.089	.042	.050	.029	.014	

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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm										
NAME: 490238 BODACIOUS					TYPE:490238 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	8.2	9.3	8.4	9.4	9.6	-4.4	-3.4	-4.2	-3.2	-3.0
3H	8.1	9.0	8.3	9.2	9.5	-4.6	-3.6	-4.4	-3.4	-3.2
4H	8.0	8.9	8.3	9.1	9.4	-4.7	-3.8	-4.4	-3.5	-3.3
6H	7.9	8.8	8.2	9.0	9.3	-4.8	-3.9	-4.5	-3.7	-3.4
8H	7.9	8.7	8.2	9.0	9.2	-4.8	-4.0	-4.5	-3.7	-3.5
12H	7.8	8.6	8.1	8.9	9.2	-4.9	-4.1	-4.6	-3.8	-3.5
4H 2H	7.9	8.8	8.2	9.1	9.3	-4.7	-3.8	-4.4	-3.5	-3.3
3H	7.8	8.6	8.1	8.9	9.1	-4.9	-4.1	-4.5	-3.8	-3.5
4H	7.7	8.4	8.1	8.7	9.0	-5.0	-4.2	-4.6	-3.9	-3.6
6H	7.6	8.3	8.0	8.6	8.9	-5.0	-4.4	-4.7	-4.1	-3.7
8H	7.6	8.2	8.0	8.5	8.9	-5.1	-4.5	-4.7	-4.1	-3.8
12H	7.5	8.1	7.9	8.4	8.8	-5.1	-4.6	-4.7	-4.2	-3.8
8H 4H	7.6	8.1	8.0	8.5	8.9	-5.1	-4.5	-4.7	-4.1	-3.8
6H	7.5	8.0	7.9	8.4	8.8	-5.2	-4.7	-4.8	-4.3	-3.9
8H	7.4	7.9	7.9	8.3	8.7	-5.2	-4.8	-4.8	-4.4	-3.9
12H	7.4	7.7	7.8	8.2	8.7	-5.3	-4.9	-4.8	-4.5	-4.0
12H 4H	7.5	8.0	7.9	8.4	8.8	-5.1	-4.6	-4.7	-4.2	-3.8
6H	7.4	7.8	7.9	8.3	8.7	-5.2	-4.8	-4.8	-4.4	-3.9
8H	7.4	7.7	7.8	8.2	8.7	-5.3	-4.9	-4.8	-4.5	-4.0
Variations with the observer position at spacings:										
S = 1.0H	+ 5.7 / -10.6					+ 4.3 / -16.4				
1.5H	+ 7.3 / -15.6					+ 7.1 / -16.5				
2.0H	+10.3 / -22.9					+ 2.7 / - 1.9				

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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

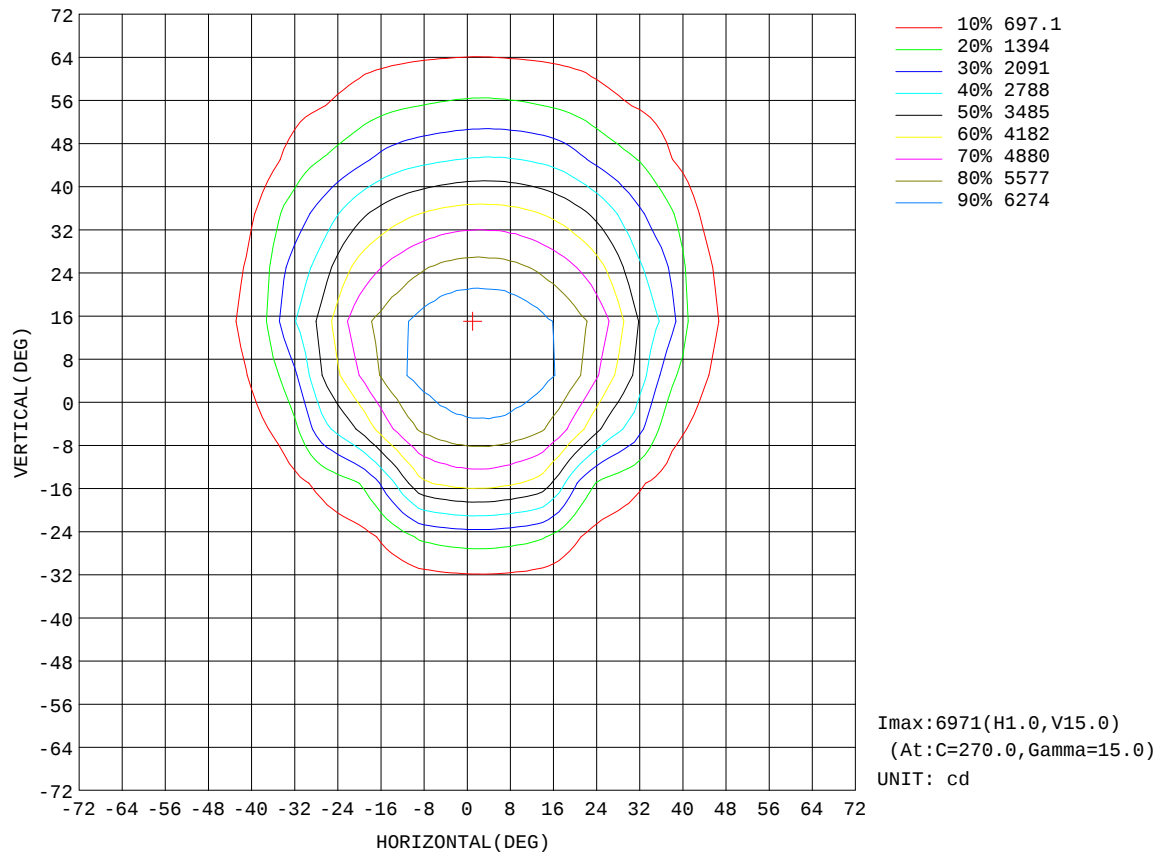
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	343	308	287	341	308	287	337	306	286	267
0.80	382	349	328	378	347	327	372	344	326	305
1.00	409	378	358	405	376	357	397	377	354	334
1.25	431	403	384	426	400	382	417	395	379	357
1.50	446	420	402	440	417	400	430	410	395	372
2.00	463	441	424	457	436	421	444	427	414	389
2.50	473	452	436	465	447	432	451	436	424	396
3.00	481	463	449	473	457	444	458	445	434	405
4.00	492	477	465	483	470	459	466	456	447	414
5.00	498	486	475	488	477	468	471	462	455	420
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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

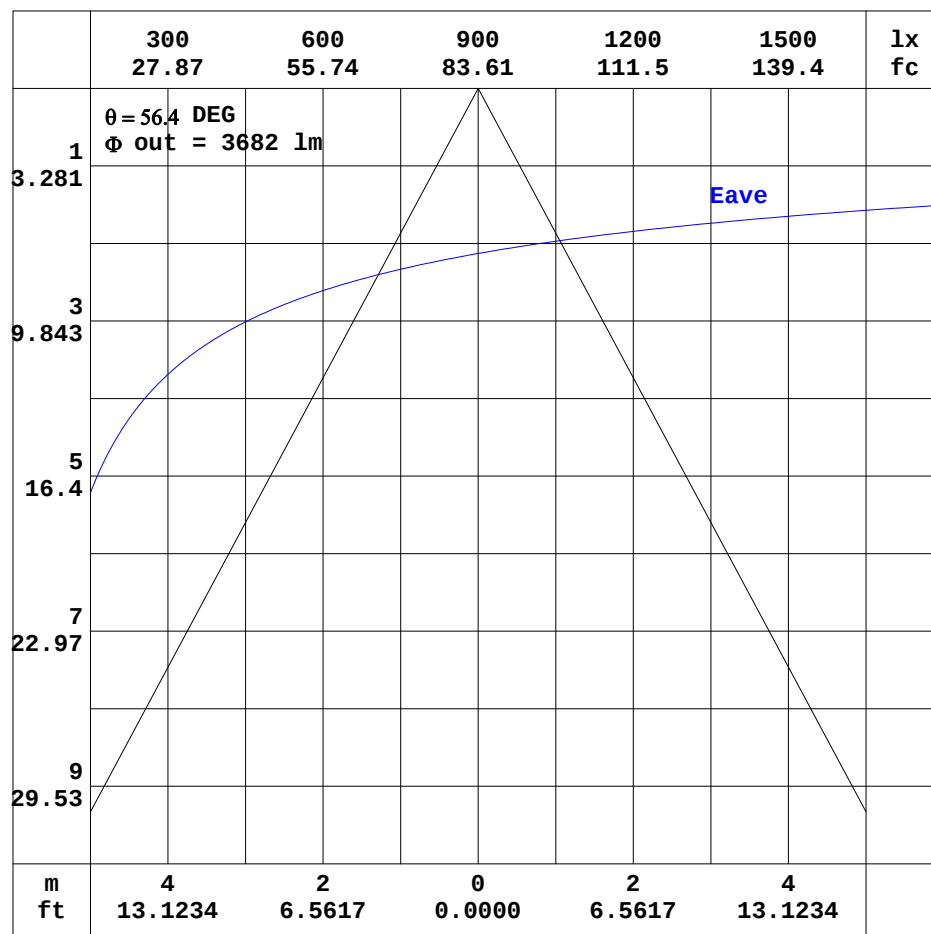


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



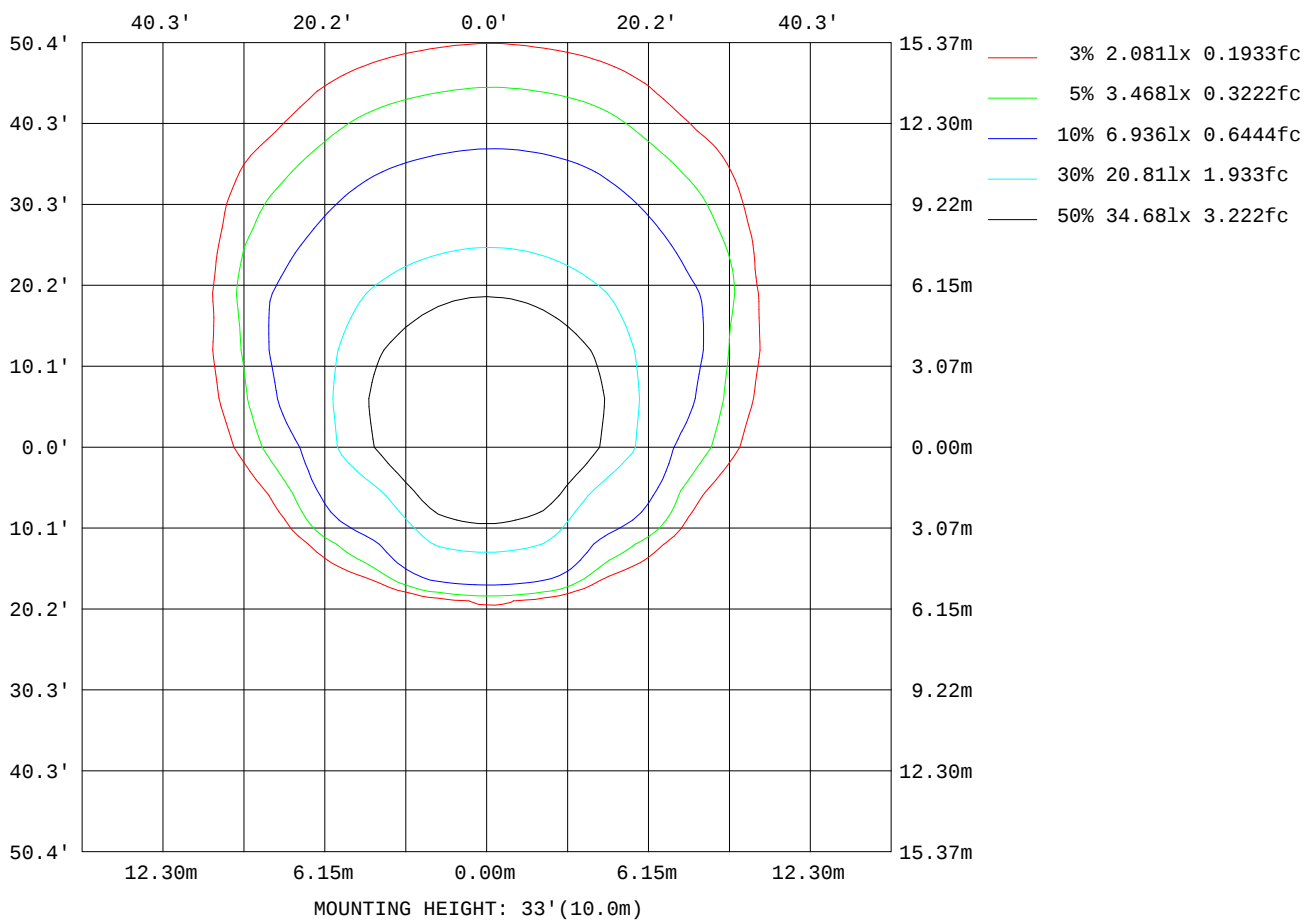
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

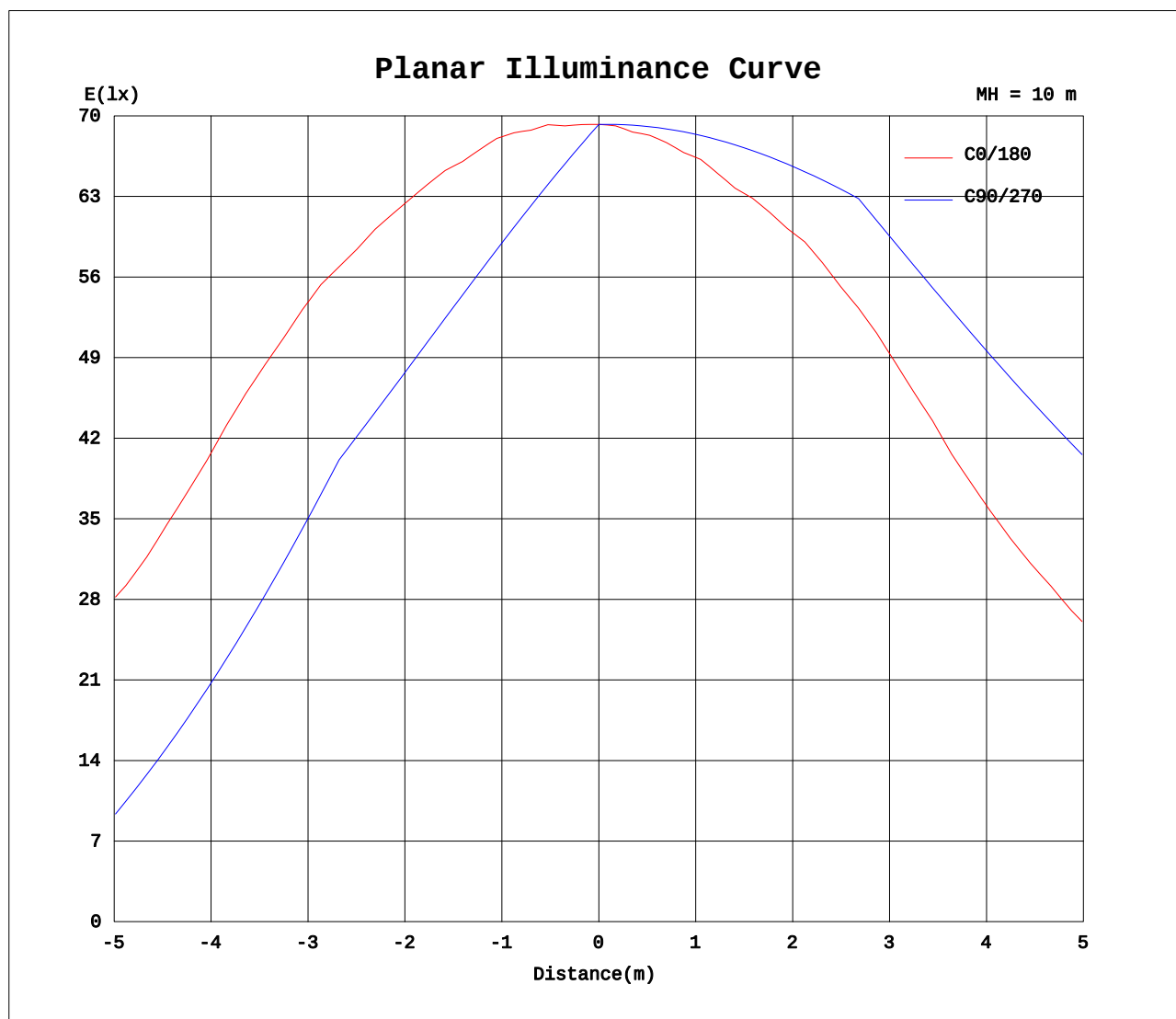
AvgL	cd/m2
L_0~180(65)av	377
L_0~180(75)av	274
L_0~180(85)av	127
L_90~270(65)av	3636
L_90~270(75)av	1050
L_90~270(85)av	0
L_45(65)av	1298
L_45(75)av	692
L_45(85)av	0

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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 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:11.45V I:1.932A P:16.98W PF:0.7674 Lamp Flux:235x1 lm		
NAME: 490238 BODACIOUS	TYPE:490238 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:

```