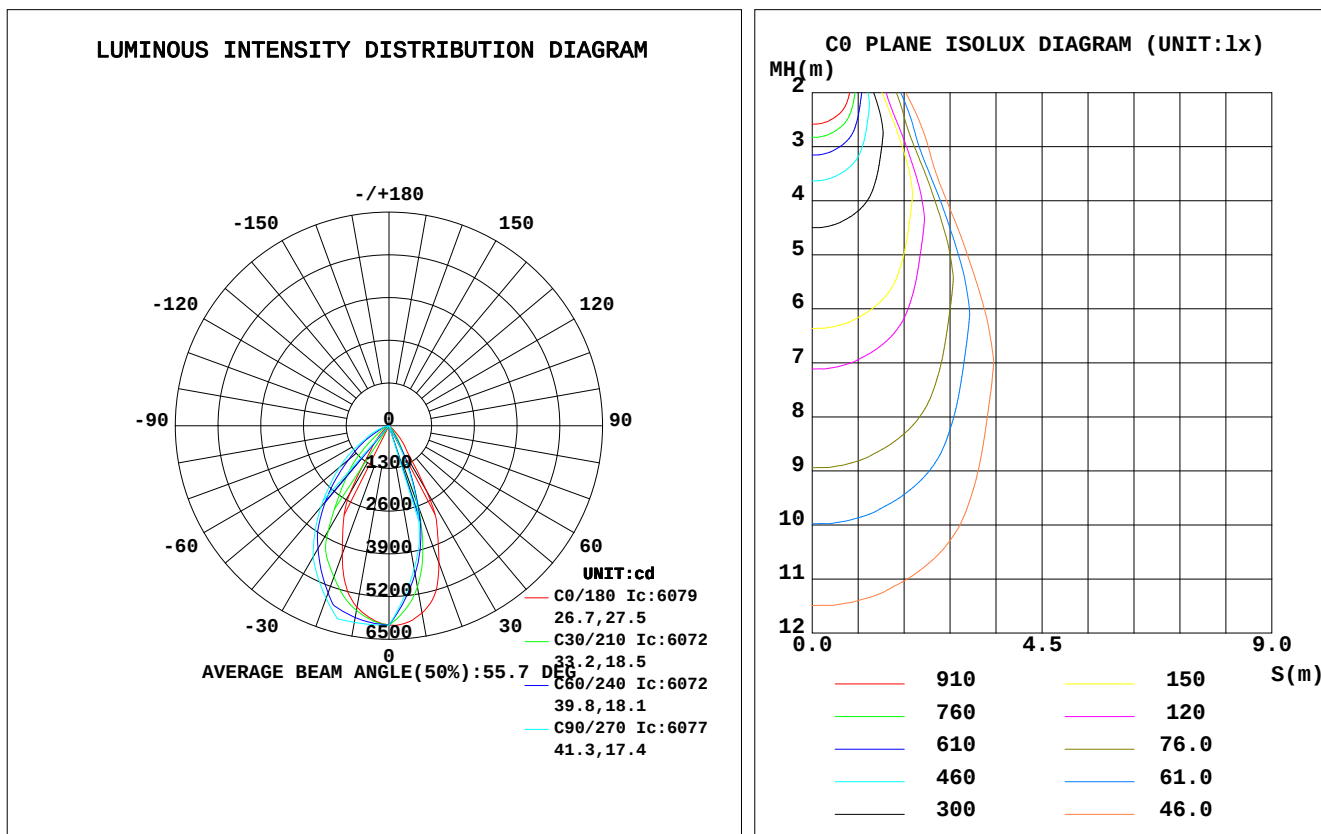


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 68.33 lm/W			
MODEL	490228 BODACIOUS	I _{max} (cd)	6079	S/MH(C0/180)	0.81
NOMINAL POWER(W)	12	LOR(%)	369.9	S/MH(C90/270)	1.15
RATED VOLTAGE(V)	12	TOTAL FLUX(lm)	5548.9	η UP, DN(C0-180)	0.0, 87.4
NOMINAL FLUX(lm)	1500	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 282.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	12	η down(%)	369.9	CIBSE SHR MAX	0.80



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	6019	5465	5248	5395	5903	5981	6074	6048	0- 5	140.3	140.3	2.53, 9.35
10	5784	4753	4424	4564	5608	5806	6075	5941	5- 10	395.7	535.9	9.66, 35.7
15	5344	3743	3600	3490	5049	5576	6077	5740	10- 15	599.5	1135	20.5, 75.7
20	4447	2354	2447	2231	4161	5296	5592	5464	15- 20	719.1	1855	33.4, 124
25	3481	1198	1294	1230	3297	4729	5107	4994	20- 25	735.9	2591	46.7, 173
30	2265	570.6	141.3	620.1	2401	4099	4623	4282	25- 30	690.6	3281	59.1, 219
35	983.1	224.1	94.61	253.6	1154	3375	3922	3528	30- 35	589.3	3870	69.8, 258
40	625.2	9.016	47.93	24.76	714.0	2600	3222	2670	35- 40	490.8	4361	78.6, 291
45	301.9	0.861	1.248	18.83	418.0	1832	2522	1885	40- 45	388.6	4750	85.6, 317
50	93.74	3.777	0.8499	11.99	173.0	1264	1962	1221	45- 50	290.2	5040	90.8, 336
55	30.87	0.0015	0.4520	5.154	60.91	773.1	1402	627.8	50- 55	206.3	5246	94.5, 350
60	22.53	0.0313	0.0542	3.187	31.21	418.6	842.0	369.1	55- 60	134.9	5381	97, 359
65	15.97	0.0628	0.1987	1.203	23.43	196.4	597.7	193.2	60- 65	80.12	5461	98.4, 364
70	9.904	0.1312	0.3432	0.1562	17.33	95.46	353.4	93.07	65- 70	49.39	5511	99.3, 367
75	4.976	0.2483	0.4877	0.3318	11.88	56.91	109.2	52.96	70- 75	26.72	5537	99.8, 369
80	0.8332	0.2819	0	0.3904	7.379	23.79	0	21.99	75- 80	9.563	5547	100, 370
85	0	0	0	0	3.855	0	0	0	80- 85	1.741	5549	100, 370
90	0	0	0	0	1.214	0	0	0	85- 90	0.1826	5549	100, 370
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		

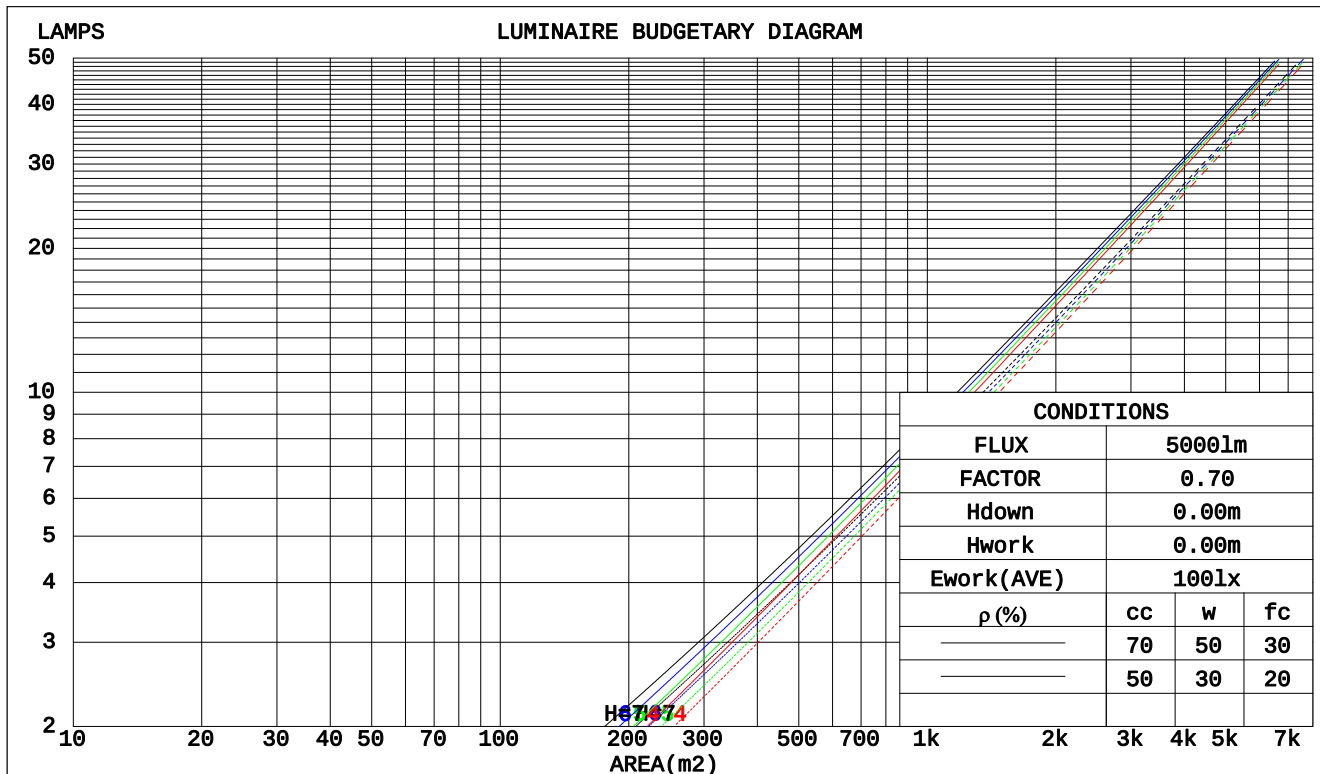
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 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	4.40	4.40	4.40	4.30	4.30	4.30	4.11	4.11	4.11	3.94	3.94	3.94	3.77	3.77	3.77	3.70
1.0	4.05	3.95	3.86	3.97	3.88	3.80	3.82	3.75	3.68	3.68	3.62	3.57	3.56	3.51	3.47	3.40
2.0	3.72	3.55	3.41	3.66	3.50	3.37	3.54	3.41	3.30	3.42	3.32	3.23	3.32	3.24	3.16	3.10
3.0	3.43	3.22	3.05	3.37	3.18	3.03	3.27	3.11	2.98	3.18	3.05	2.93	3.10	2.98	2.89	2.82
4.0	3.17	2.93	2.76	3.12	2.91	2.74	3.04	2.85	2.71	2.96	2.80	2.68	2.89	2.76	2.64	2.58
5.0	2.93	2.69	2.51	2.90	2.67	2.50	2.83	2.63	2.48	2.76	2.59	2.45	2.70	2.55	2.43	2.37
6.0	2.73	2.48	2.31	2.70	2.47	2.30	2.64	2.43	2.28	2.58	2.40	2.26	2.53	2.37	2.25	2.19
7.0	2.55	2.30	2.13	2.52	2.29	2.12	2.47	2.26	2.11	2.42	2.24	2.10	2.38	2.21	2.08	2.03
8.0	2.38	2.14	1.97	2.36	2.13	1.97	2.32	2.11	1.96	2.28	2.09	1.95	2.24	2.07	1.94	1.89
9.0	2.24	2.00	1.84	2.22	1.99	1.83	2.18	1.97	1.83	2.15	1.96	1.82	2.11	1.94	1.81	1.76
10.0	2.11	1.87	1.72	2.09	1.87	1.72	2.06	1.85	1.71	2.03	1.84	1.71	2.00	1.83	1.70	1.65



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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm									
NAME: 490228 BODACIOUS					TYPE:490228 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	.740	.421	.133	.715	.408	.129	.667	.383	.122	.624	.360	.116	.584	.339	.109		
2.0	.717	.393	.120	.695	.383	.118	.655	.364	.113	.618	.347	.109	.584	.331	.104		
3.0	.684	.364	.109	.665	.356	.107	.631	.342	.104	.599	.328	.101	.569	.315	.098		
4.0	.649	.337	.099	.633	.331	.098	.603	.320	.096	.575	.309	.093	.550	.299	.091		
5.0	.616	.314	.091	.602	.309	.090	.576	.300	.088	.551	.291	.087	.528	.282	.085		
6.0	.585	.293	.084	.572	.289	.083	.549	.281	.082	.527	.274	.081	.507	.267	.079		
7.0	.555	.275	.078	.544	.271	.077	.524	.265	.076	.504	.259	.075	.486	.252	.074		
8.0	.528	.258	.073	.518	.255	.072	.500	.250	.071	.482	.244	.071	.466	.239	.070		
9.0	.503	.243	.068	.494	.241	.068	.478	.236	.067	.462	.232	.066	.447	.227	.066		
10.0	.480	.230	.064	.472	.228	.064	.457	.224	.063	.443	.220	.063	.429	.216	.062		

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	.705	.705	.705	.602	.602	.602	.411	.411	.411	.236	.236	.236	.075	.075	.075	
1.0	.639	.581	.529	.547	.499	.455	.374	.343	.315	.215	.199	.183	.069	.064	.059	
2.0	.589	.490	.406	.504	.422	.351	.346	.292	.245	.199	.170	.144	.064	.055	.047	
3.0	.548	.421	.319	.470	.363	.277	.322	.252	.194	.186	.147	.114	.060	.048	.038	
4.0	.513	.368	.256	.440	.318	.223	.303	.221	.157	.175	.130	.093	.056	.042	.030	
5.0	.483	.326	.210	.415	.282	.182	.286	.197	.129	.166	.116	.076	.053	.038	.025	
6.0	.457	.292	.174	.392	.253	.152	.271	.177	.107	.157	.104	.064	.051	.034	.021	
7.0	.433	.265	.147	.372	.230	.128	.257	.161	.091	.149	.095	.054	.048	.031	.018	
8.0	.412	.243	.126	.354	.210	.110	.245	.148	.078	.143	.087	.047	.046	.029	.015	
9.0	.392	.224	.110	.338	.194	.096	.234	.136	.068	.136	.081	.041	.044	.026	.013	
10.0	.374	.208	.097	.323	.180	.084	.224	.127	.060	.131	.075	.036	.042	.025	.012	

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm										
NAME: 490228 BODACIOUS					TYPE:490228 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	5.1	6.2	5.4	6.4	6.5	-10.7	-9.6	-10.4	-9.4	-9.2
3H	5.0	5.9	5.2	6.2	6.4	-10.8	-9.8	-10.6	-9.6	-9.4
4H	4.9	5.8	5.1	6.0	6.3	-10.9	-10.0	-10.6	-9.8	-9.5
6H	4.8	5.6	5.1	5.9	6.2	-11.0	-10.1	-10.7	-9.9	-9.6
8H	4.7	5.6	5.0	5.8	6.1	-11.1	-10.2	-10.7	-10.0	-9.7
12H	4.7	5.5	5.0	5.8	6.0	-11.1	-10.3	-10.8	-10.0	-9.7
4H 2H	4.8	5.8	5.1	6.0	6.2	-10.9	-10.0	-10.6	-9.7	-9.5
3H	4.7	5.5	5.0	5.8	6.0	-11.1	-10.3	-10.7	-10.0	-9.7
4H	4.6	5.3	4.9	5.6	5.9	-11.1	-10.4	-10.8	-10.1	-9.8
6H	4.5	5.1	4.9	5.5	5.8	-11.2	-10.6	-10.9	-10.3	-9.9
8H	4.4	5.0	4.8	5.4	5.8	-11.3	-10.7	-10.9	-10.3	-10.0
12H	4.4	4.9	4.8	5.3	5.7	-11.3	-10.8	-10.9	-10.4	-10.0
8H 4H	4.4	5.0	4.8	5.4	5.8	-11.3	-10.7	-10.9	-10.3	-10.0
6H	4.3	4.8	4.8	5.2	5.6	-11.4	-10.9	-10.9	-10.5	-10.1
8H	4.3	4.7	4.7	5.1	5.6	-11.4	-11.0	-11.0	-10.6	-10.1
12H	4.2	4.6	4.7	5.1	5.5	-11.5	-11.1	-11.0	-10.7	-10.2
12H 4H	4.4	4.9	4.8	5.3	5.7	-11.3	-10.8	-10.9	-10.4	-10.0
6H	4.3	4.7	4.7	5.1	5.6	-11.4	-11.0	-11.0	-10.6	-10.1
8H	4.2	4.6	4.7	5.0	5.5	-11.5	-11.1	-11.0	-10.7	-10.2
Variations with the observer position at spacings:										
S = 1.0H	+ 6.4 / -14.6					+ 5.0 / -15.1				
1.5H	+ 8.5 / -21.3					+ 7.8 / -15.5				
2.0H	+11.1 / -25.7					+ 1.0 / - 1.0				

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

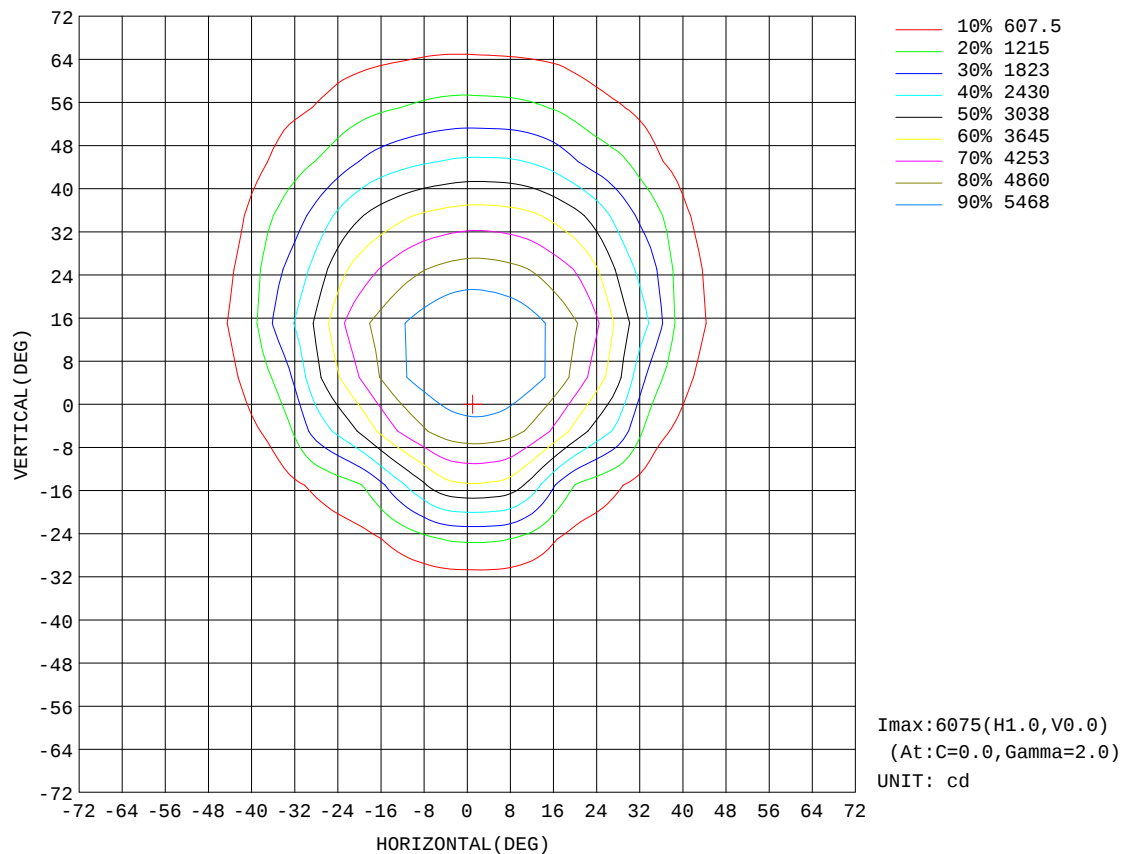
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	288	258	241	286	258	240	283	256	240	223
0.80	321	293	275	318	291	274	313	289	273	256
1.00	344	318	300	340	316	299	334	317	297	280
1.25	363	339	322	359	336	321	351	332	318	300
1.50	376	353	338	371	350	336	362	345	332	313
2.00	390	371	357	385	367	354	374	360	348	327
2.50	398	381	367	392	376	364	380	367	357	333
3.00	406	390	378	399	385	374	386	375	366	340
4.00	415	402	392	407	396	386	393	384	377	349
5.00	420	409	400	412	402	395	397	390	383	354
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
 γ 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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

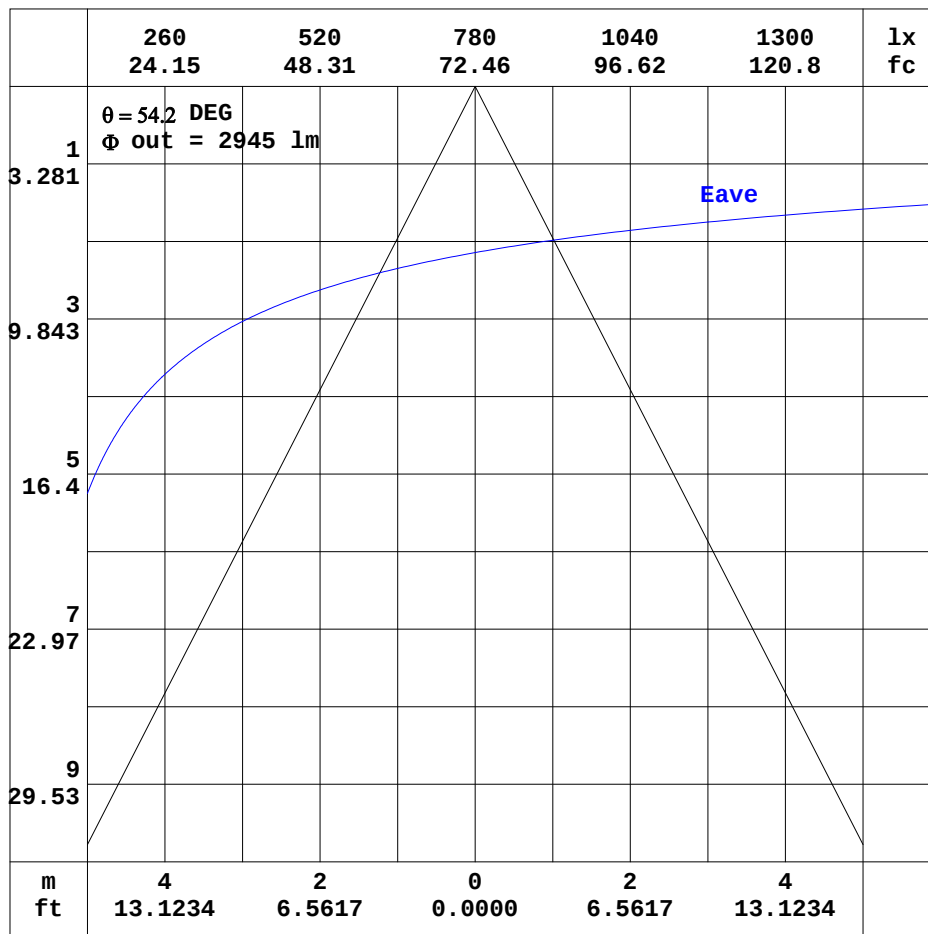


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:Y
Test Date:2025-04-17

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



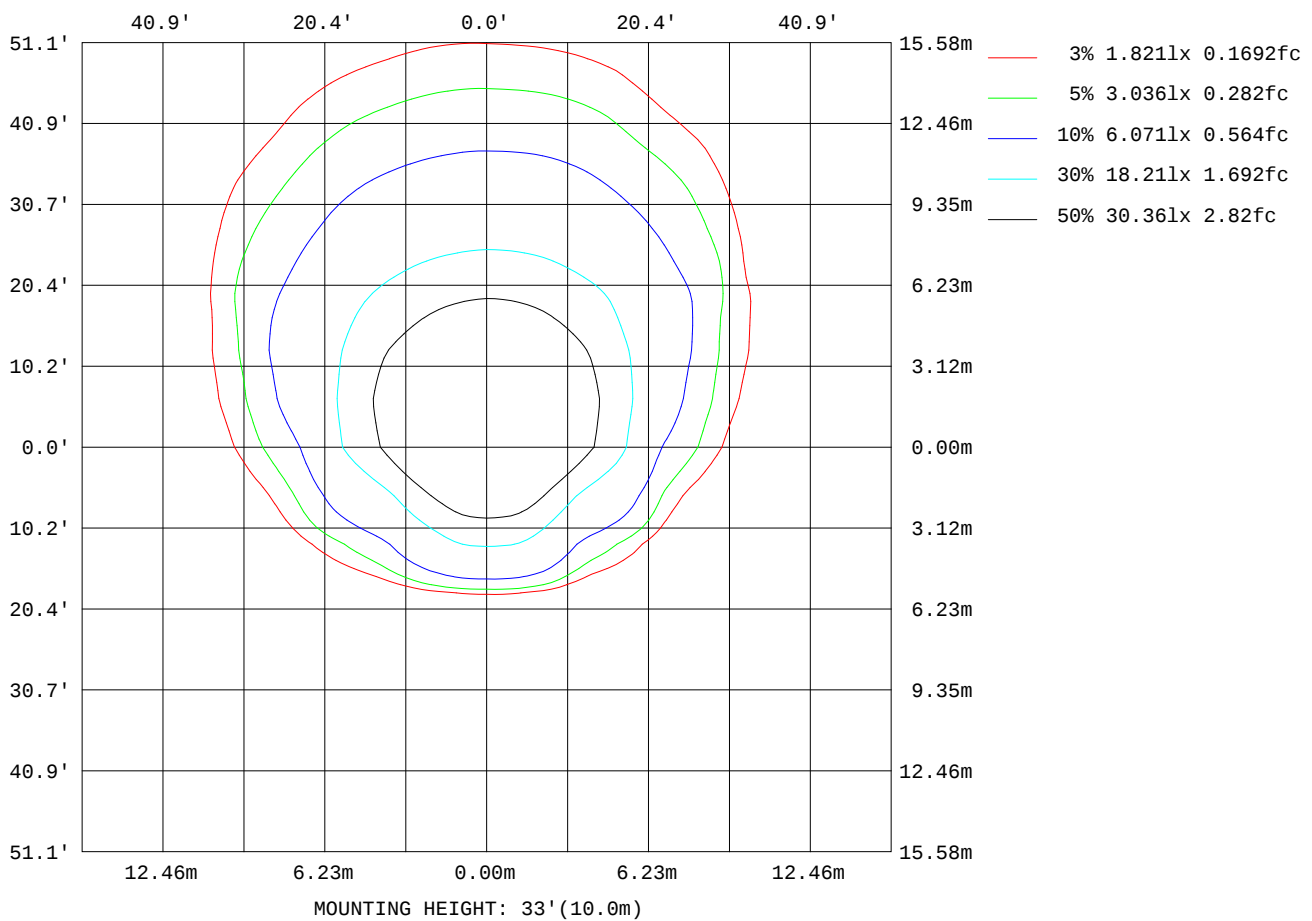
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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
 γ 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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

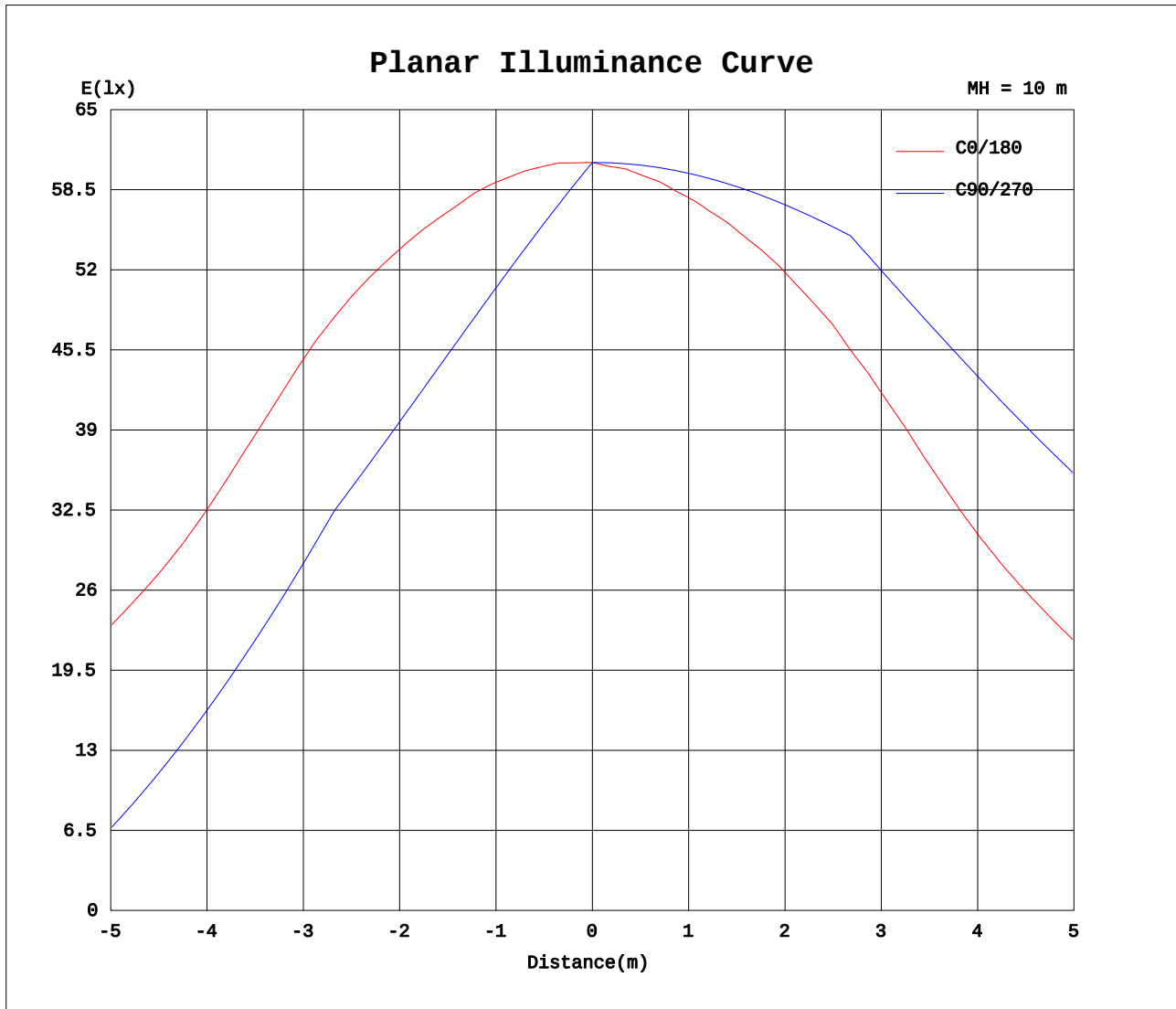
AvgL	cd/m2
L_0~180(65)av	233
L_0~180(75)av	163
L_0~180(85)av	111
L_90~270(65)av	3537
L_90~270(75)av	1059
L_90~270(85)av	0
L_45(65)av	1156
L_45(75)av	533
L_45(85)av	0

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 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

```

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 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

```

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 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

```

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:11.59V I:1.473A P:12.72W PF:0.7456 Lamp Flux:235x1 lm		
NAME: 490228 BODACIOUS	TYPE:490228 BODACIOUS	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

UNIT: cd

[illegible]

```

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:

```