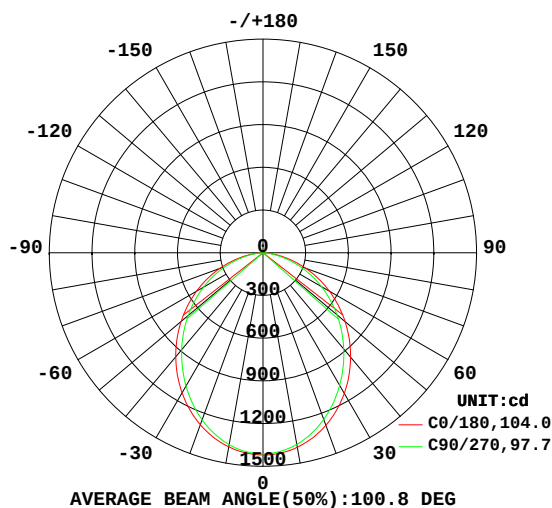


LUMINAIRE PHOTOMETRIC TEST REPORT

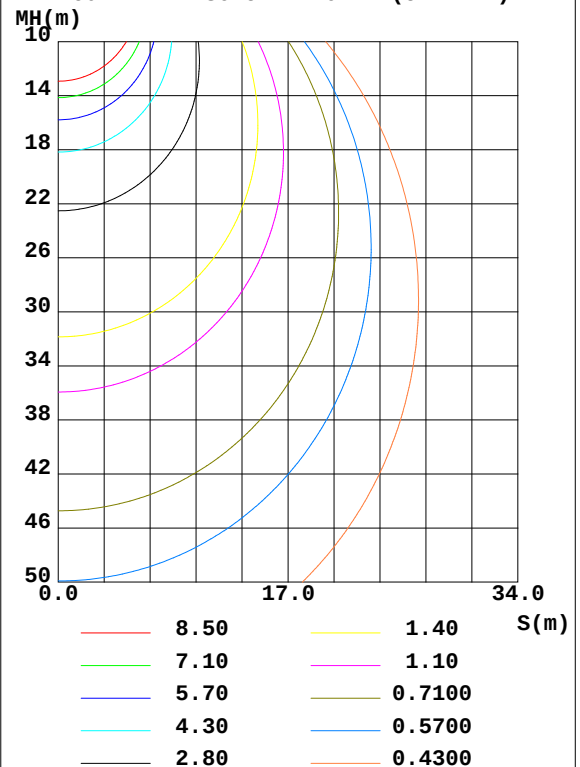
Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 88.61 lm/W
MODEL	2835 3000K	I _{max} (cd)	1420	S/MH(C0/180)	1.20	
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.15	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	3509.4	η UP, DN(C0-180)	0.0, 49.8	
NOMINAL FLUX(lm)	3509.44	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.2	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.35	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-31

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

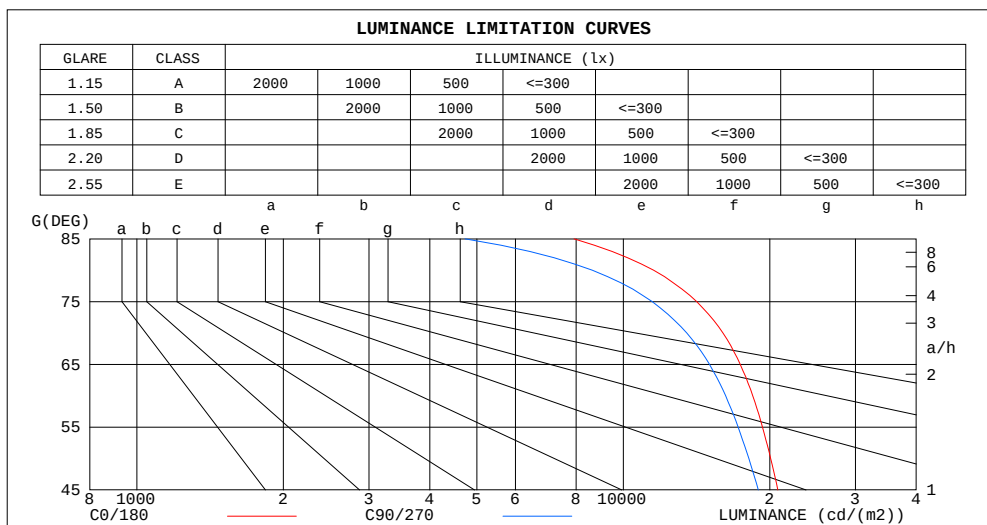
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1387	1375	1367	1366	1385	1375	1368	1369	0- 10	132.9	132.9	3.79,3.79
20	1290	1266	1246	1256	1286	1265	1249	1263	10- 20	373.5	506.5	14.4,14.4
30	1142	1106	1076	1096	1137	1105	1081	1105	20- 30	547.5	1054	30,30
40	957.1	915.8	882.3	907.0	953.3	916.7	888.2	917.8	30- 40	633.5	1687	48.1,48.1
50	752.8	712.4	679.0	705.6	750.7	715.1	686.1	716.4	40- 50	629.7	2317	66,66
60	537.9	502.2	473.0	498.3	538.5	507.9	481.4	508.6	50- 60	545.4	2863	81.6,81.6
70	319.6	291.1	269.3	290.1	323.5	299.8	278.9	299.6	60- 70	396.2	3259	92.9,92.9
80	116.9	99.17	87.41	100.4	121.9	107.0	95.06	105.7	70- 80	207.6	3466	98.8,98.8
90	1.668	1.773	1.461	1.796	2.393	2.007	1.553	1.879	80- 90	43.08	3509	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		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	7921	4727
80	11544	8633
75	14149	11461
70	16025	13505
65	17392	15029
60	18451	16225
55	19317	17219
50	20084	18117
45	20783	18949

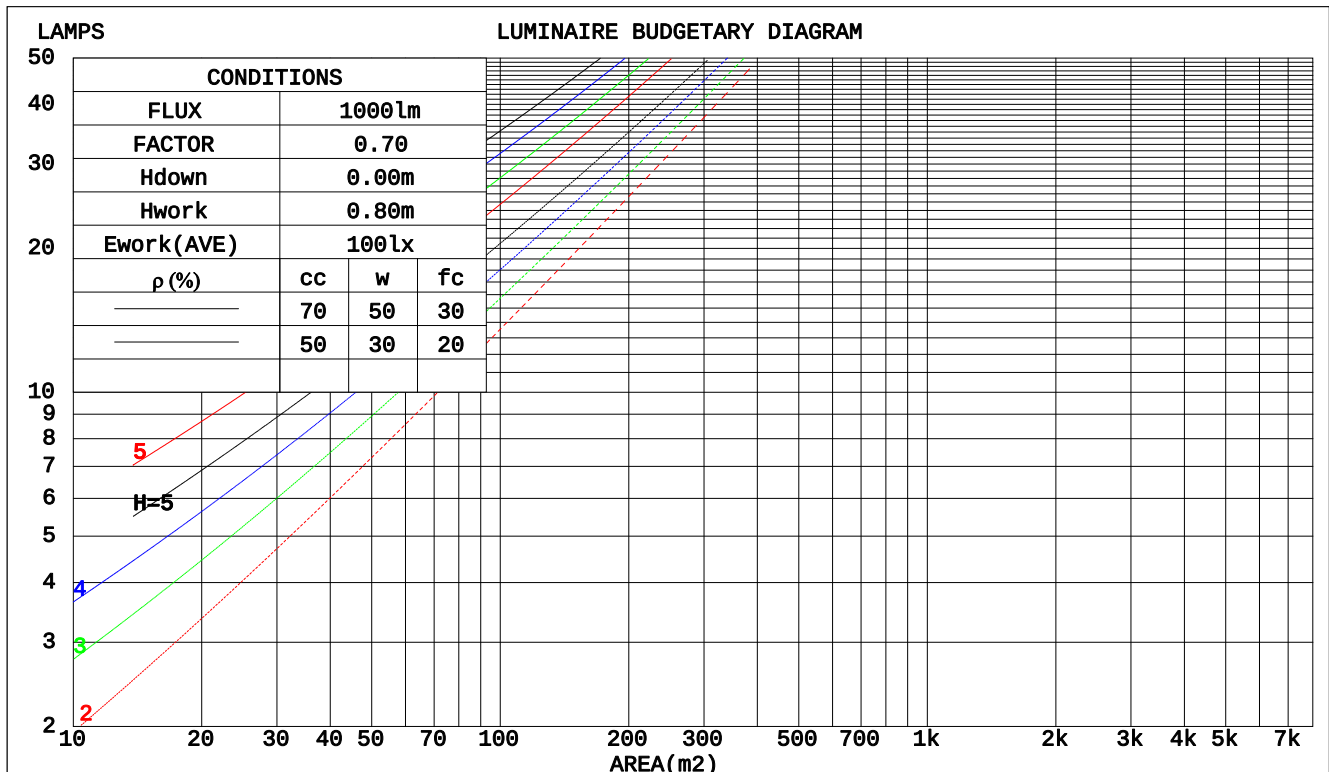
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-31

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	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	1.00
1.0	1.05	1.01	.97	1.03	.99	.95	.98	.95	.92	.94	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.86	.81	.77	.83	.79	.75	.80	.77	.74	.71
3.0	.81	.73	.67	.79	.72	.66	.76	.70	.65	.74	.68	.64	.71	.67	.63	.61
4.0	.72	.63	.57	.71	.63	.57	.68	.61	.56	.66	.60	.55	.64	.59	.54	.52
5.0	.65	.56	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.58	.52	.47	.45
6.0	.58	.50	.43	.57	.49	.43	.56	.48	.43	.54	.47	.42	.52	.46	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.51	.43	.38	.49	.43	.38	.48	.42	.37	.35
8.0	.48	.40	.34	.48	.40	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.45	.36	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.30	.29
10.0	.41	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	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	.293	.166	.053	.286	.163	.052	.272	.156	.050	.260	.150	.048	.249	.144	.047		
2.0	.279	.153	.047	.272	.150	.046	.261	.145	.045	.250	.140	.044	.240	.136	.043		
3.0	.260	.138	.041	.254	.136	.041	.244	.132	.040	.234	.128	.039	.226	.125	.039		
4.0	.241	.125	.037	.236	.123	.036	.227	.120	.036	.219	.117	.035	.211	.114	.035		
5.0	.223	.114	.033	.219	.113	.033	.211	.110	.032	.204	.107	.032	.197	.105	.032		
6.0	.208	.104	.030	.204	.103	.030	.197	.101	.029	.190	.099	.029	.184	.097	.029		
7.0	.194	.096	.027	.191	.095	.027	.184	.093	.027	.178	.091	.027	.173	.090	.026		
8.0	.182	.089	.025	.179	.088	.025	.173	.086	.025	.167	.085	.024	.162	.083	.024		
9.0	.170	.082	.023	.168	.082	.023	.163	.080	.023	.158	.079	.023	.153	.078	.022		
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.145	.073	.021		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.162	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.060	.133	.087	.052	.091	.061	.036	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.127	.078	.042	.087	.055	.030	.051	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.030	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.127	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm											
NAME: LL1200M-BKTC40S					TYPE:			WEIGHT:			
SPEC.: black RA90 3000K+5700K					DIM.:			SERIAL No.:			
MFR.:					SUR.: 1190*49mm			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	2H	18.7	20.2	19.0	20.4	20.6	18.2	19.7	18.5	19.9	20.1
	3H	20.1	21.5	20.4	21.7	22.0	19.4	20.8	19.7	21.0	21.3
	4H	20.6	21.9	21.0	22.2	22.4	19.9	21.2	20.2	21.4	21.7
	6H	21.0	22.2	21.3	22.4	22.7	20.1	21.3	20.4	21.6	21.9
	8H	21.0	22.2	21.4	22.5	22.8	20.1	21.3	20.5	21.6	21.9
	12H	21.0	22.2	21.4	22.5	22.8	20.1	21.3	20.5	21.5	21.8
4H	2H	19.2	20.5	19.5	20.8	21.0	18.8	20.1	19.1	20.3	20.6
	3H	20.8	21.9	21.1	22.2	22.5	20.2	21.4	20.6	21.6	21.9
	4H	21.4	22.5	21.8	22.8	23.1	20.8	21.8	21.1	22.1	22.4
	6H	21.9	22.8	22.2	23.1	23.5	21.1	22.0	21.5	22.3	22.7
	8H	22.0	22.8	22.4	23.2	23.6	21.1	22.0	21.5	22.4	22.7
	12H	22.0	22.8	22.4	23.2	23.6	21.1	21.9	21.6	22.3	22.7
8H	4H	21.6	22.4	22.0	22.8	23.2	21.0	21.8	21.4	22.2	22.6
	6H	22.1	22.8	22.6	23.2	23.7	21.4	22.1	21.8	22.5	22.9
	8H	22.3	22.9	22.7	23.3	23.8	21.5	22.1	22.0	22.6	23.0
	12H	22.4	22.9	22.9	23.4	23.8	21.5	22.1	22.0	22.5	23.0
12H	4H	21.6	22.4	22.0	22.7	23.1	21.0	21.8	21.4	22.1	22.5
	6H	22.1	22.8	22.6	23.2	23.6	21.4	22.1	21.9	22.5	22.9
	8H	22.3	22.9	22.8	23.3	23.8	21.6	22.1	22.0	22.5	23.0
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.4					

CIE Pub.117, 3509 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.4)
Area: 0.05831 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-31

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:

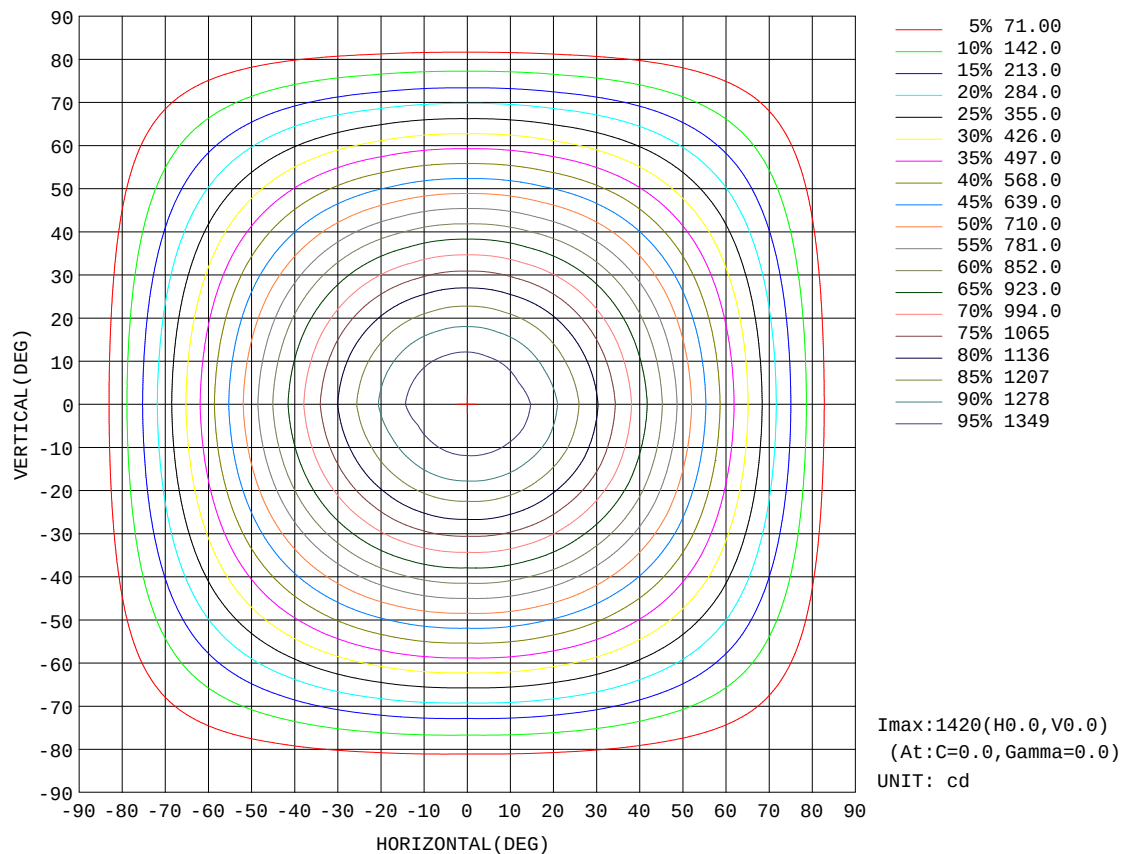
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	59	48	41	58	47	41	35
0.80	70	58	51	69	58	51	67	57	51	44
1.00	78	67	60	77	67	60	74	68	59	52
1.25	85	75	68	83	74	68	81	73	67	60
1.50	90	80	74	88	79	73	85	78	72	65
2.00	96	88	82	95	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	99	103	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:

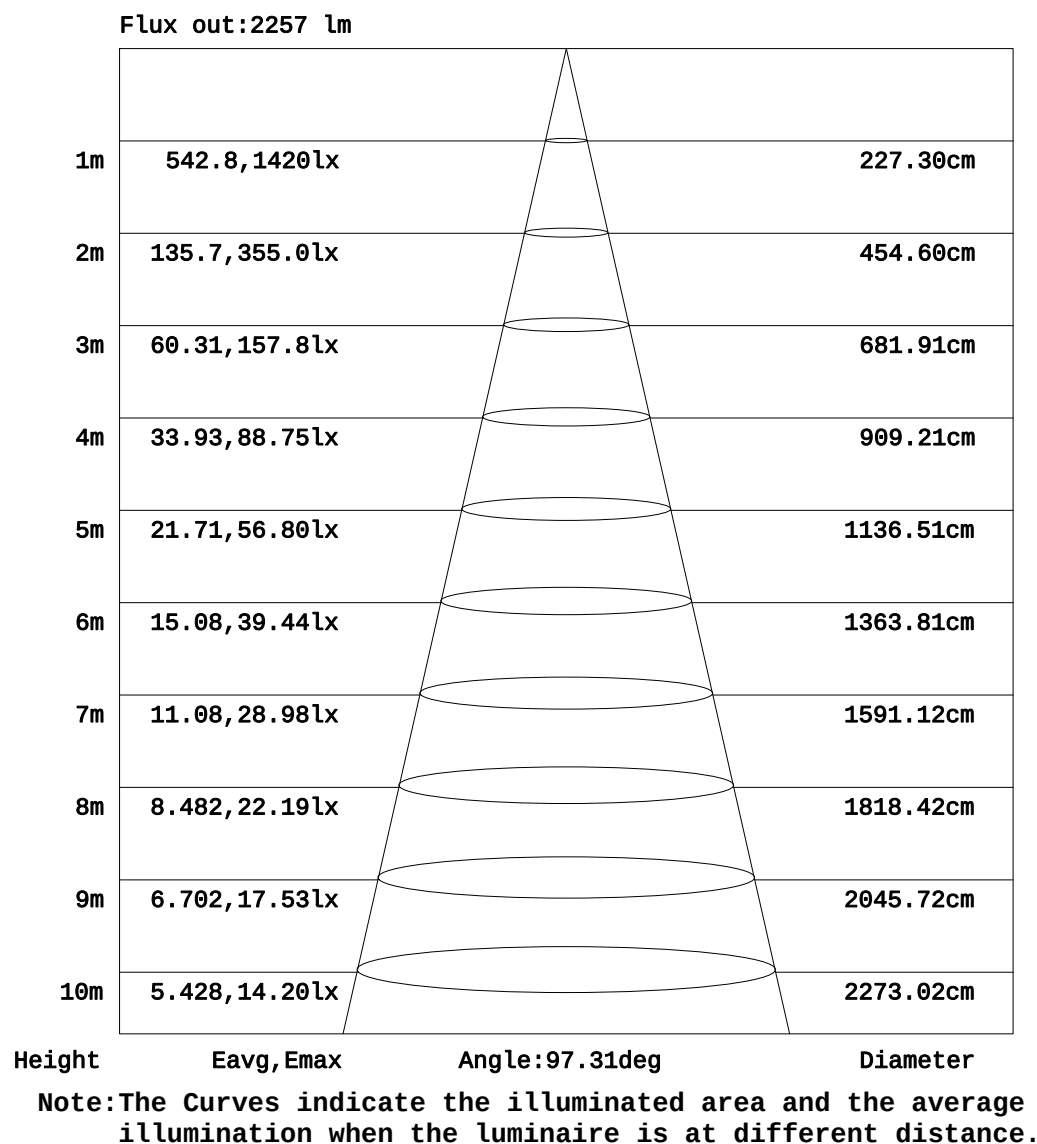


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:

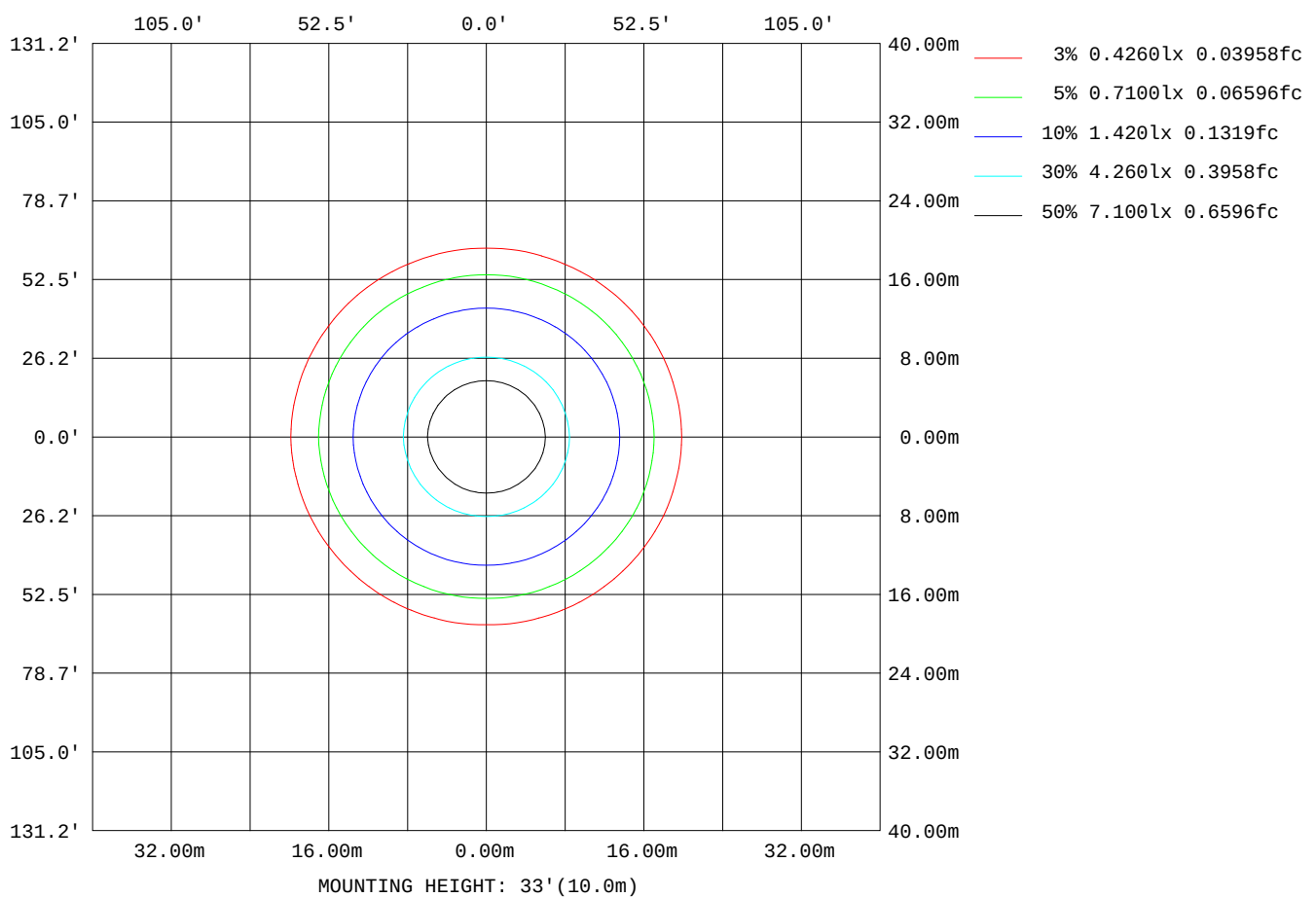


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity:65.0%
 Test Distance:7.880m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-31

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.73V I:0.1787A P:39.607W PF:0.9607 Freq:49.99Hz Lamp Flux:3509.44x1 lm		
NAME: LL1200M-BKTC40S	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 1190*49mm	Shielding Angle:

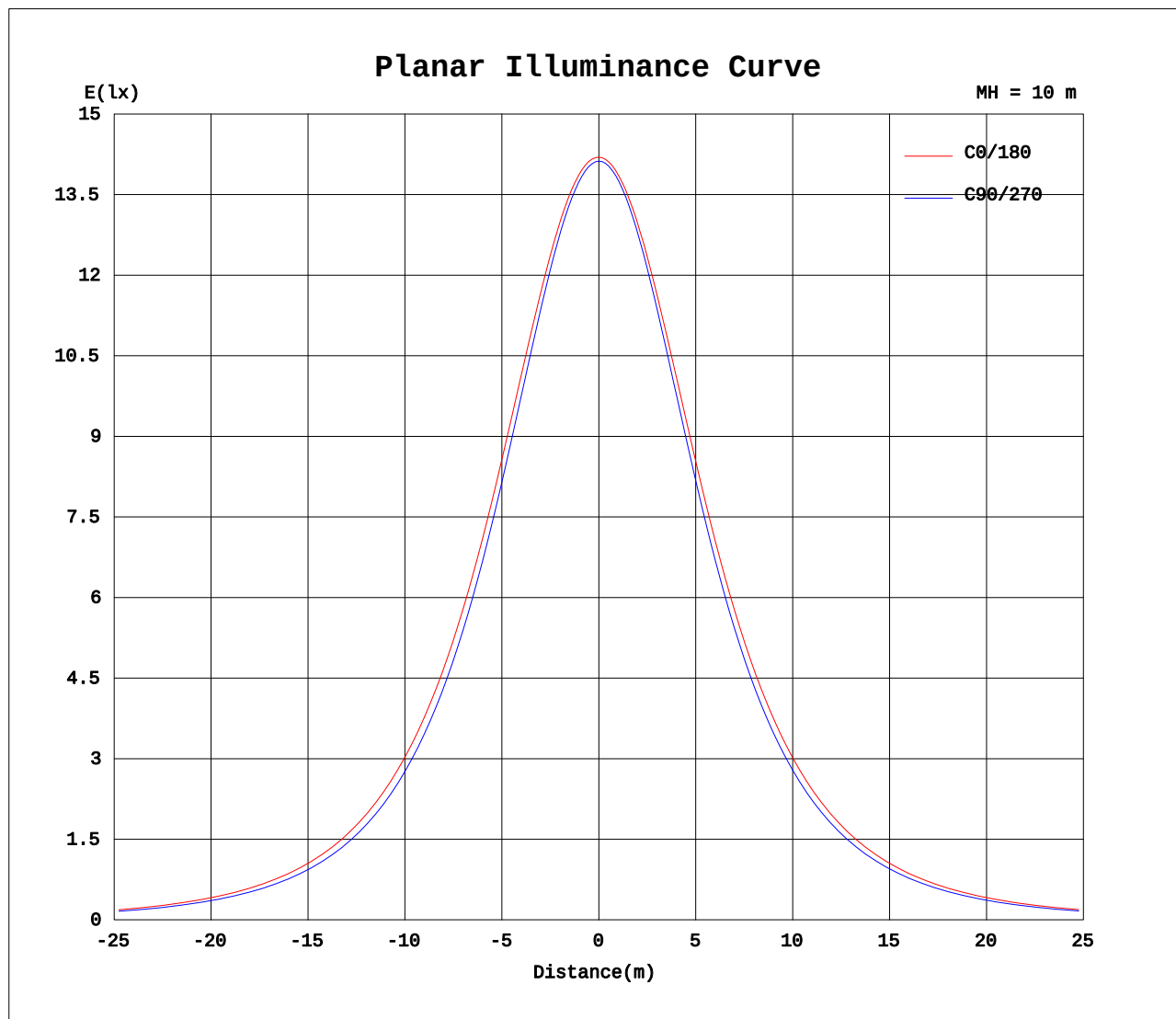
AvgL	cd/m2
L_0~180(65)av	17436
L_0~180(75)av	14314
L_0~180(85)av	8272
L_90~270(65)av	15212
L_90~270(75)av	11762
L_90~270(85)av	5224
L_45(65)av	16192
L_45(75)av	12873
L_45(85)av	6403

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity:65.0%
 Test Distance:7.880m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-31

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

```