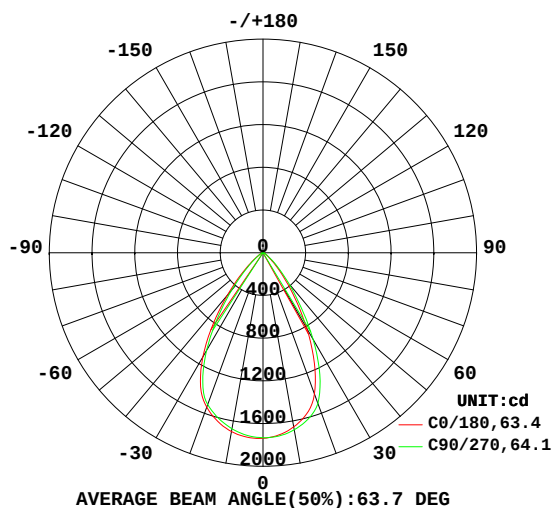


LUMINAIRE PHOTOMETRIC TEST REPORT

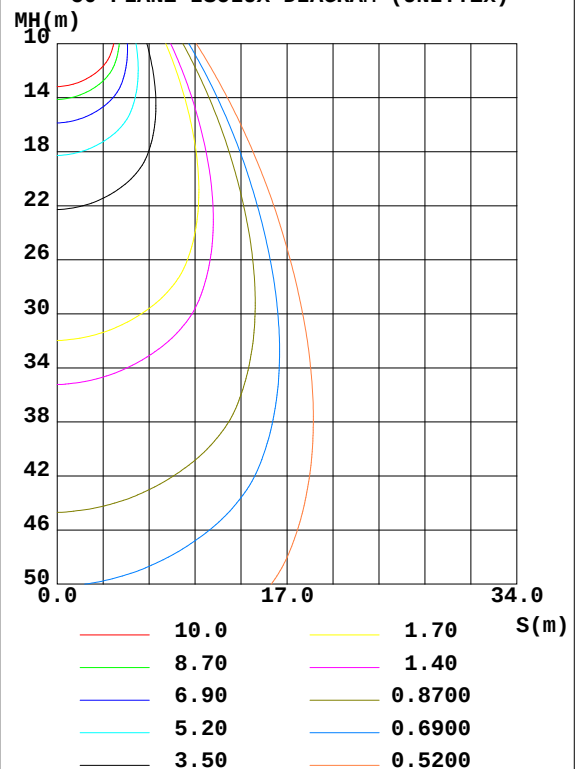
Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 101.47 lm/W			
MODEL	TB25171211 5700K	I _{max} (cd)	1739	S/MH(C0/180)	1.00
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.97
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1910.2	η UP, DN(C0-180)	0.0, 48.2
NOMINAL FLUX(lm)	1910.24	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.00

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: 2023-11-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

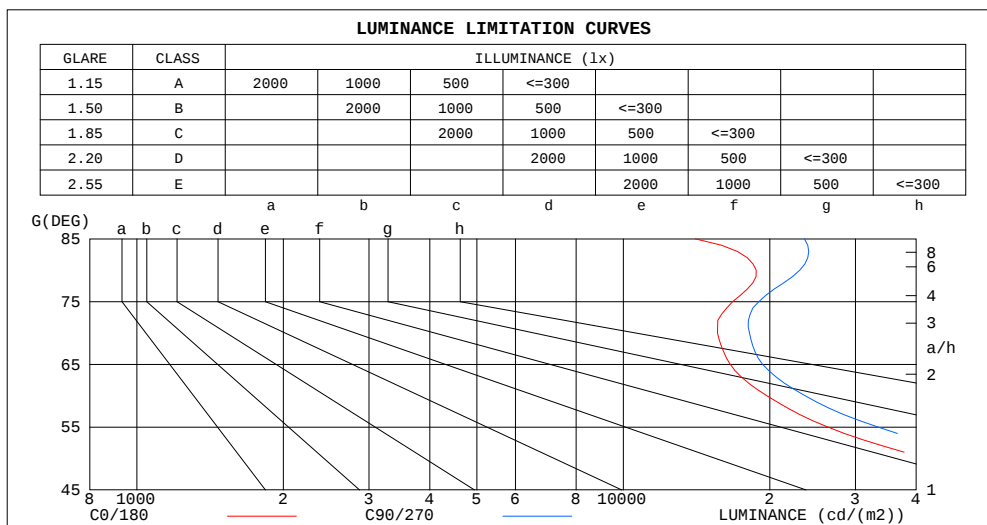
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1656	1671	1684	1691	1700	1699	1674	1647	0- 10	162.8	162.8	8.52, 8.52
20	1409	1448	1503	1506	1539	1565	1513	1404	10- 20	449.9	612.7	32.1, 32.1
30	823.3	854.7	941.6	1020	1127	1183	1058	858.3	20- 30	576.1	1189	62.2, 62.2
40	312.0	323.2	375.3	440.0	518.4	552.5	454.8	337.4	30- 40	421.0	1610	84.3, 84.3
50	89.68	97.75	117.5	136.1	156.4	163.2	129.4	95.08	40- 50	186.6	1796	94, 94
60	32.73	34.51	39.23	43.15	46.23	46.51	39.63	33.51	50- 60	62.87	1859	97.3, 97.3
70	17.73	18.77	20.63	22.04	21.79	20.69	18.63	17.21	60- 70	27.39	1887	98.8, 98.8
80	10.82	11.58	13.29	14.11	13.18	11.92	10.98	10.52	70- 80	16.37	1903	99.6, 99.6
90	0.3050	0.3552	0.3088	1.702	2.440	1.988	0.1351	0.1158	80- 90	7.167	1910	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:2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	14056	23557
80	18762	23057
75	16782	18993
70	15614	18165
65	16586	19341
60	19718	23630
55	26329	33378
50	42024	55061
45	72580	91223

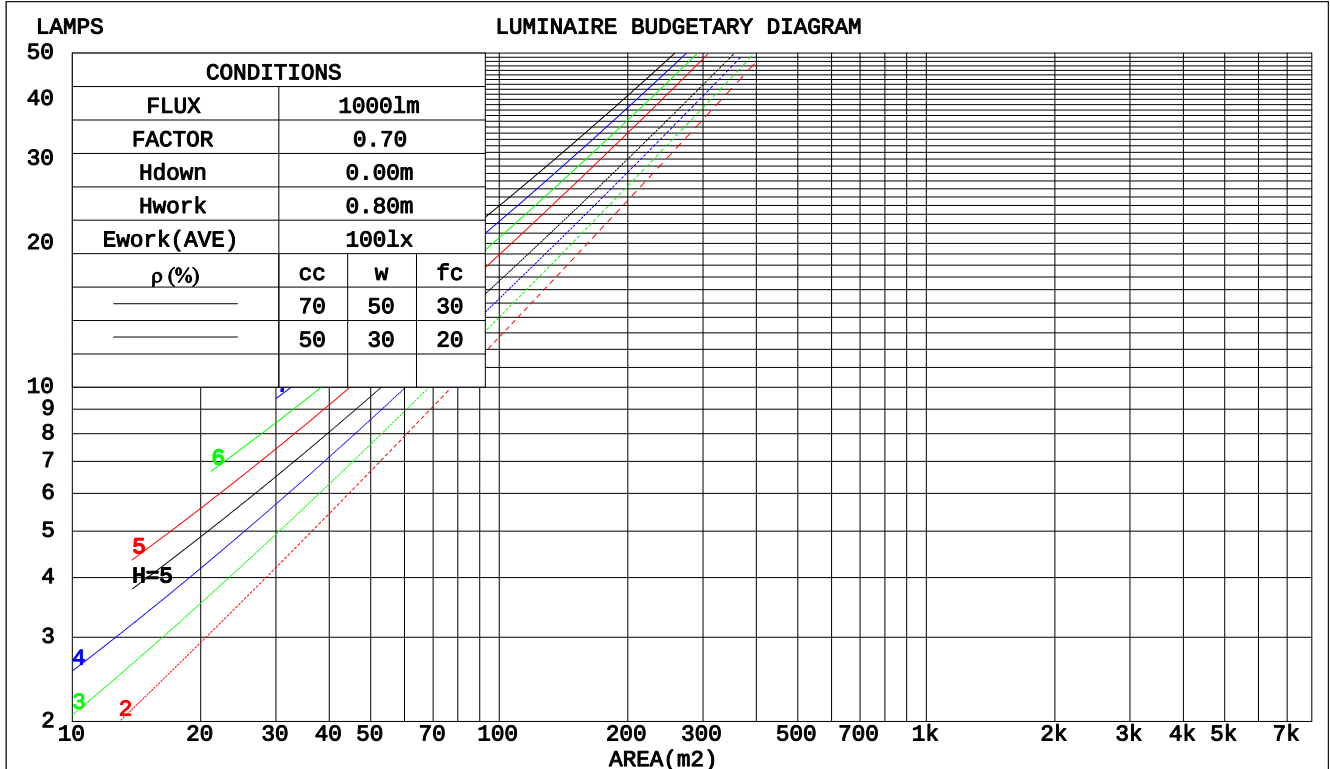
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-11-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	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	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.07	1.04	1.08	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.97	.93	.99	.95	.92	.96	.93	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.93	.88	.84	.92	.87	.83	.89	.85	.81	.87	.83	.80	.84	.81	.79	.77
4.0	.86	.80	.76	.85	.80	.75	.83	.78	.74	.81	.77	.74	.79	.76	.73	.71
5.0	.80	.74	.69	.79	.73	.69	.78	.72	.68	.76	.71	.68	.74	.70	.67	.65
6.0	.75	.68	.64	.74	.68	.63	.72	.67	.63	.71	.66	.63	.70	.65	.62	.61
7.0	.70	.63	.59	.69	.63	.59	.68	.62	.58	.67	.62	.58	.65	.61	.58	.56
8.0	.65	.59	.55	.65	.59	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.52
9.0	.61	.55	.51	.61	.55	.51	.60	.54	.51	.59	.54	.50	.58	.54	.50	.49
10.0	.58	.52	.47	.57	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.46



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm					
NAME: BJ21-WHTC20C023P			TYPE:		WEIGHT:
SPEC.: white RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 65mm		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	.198	.113	.036	.192	.109	.035	.179	.103	.033	.167	.096	.031	.156	.091	.029	
2.0	.190	.104	.032	.184	.101	.031	.173	.096	.030	.163	.092	.029	.154	.087	.027	
3.0	.180	.096	.029	.175	.094	.028	.166	.090	.027	.157	.086	.026	.149	.083	.026	
4.0	.171	.089	.026	.167	.087	.026	.159	.084	.025	.151	.081	.024	.144	.078	.024	
5.0	.162	.083	.024	.159	.081	.024	.152	.079	.023	.145	.077	.023	.139	.074	.022	
6.0	.154	.077	.022	.151	.076	.022	.145	.074	.022	.139	.072	.021	.134	.070	.021	
7.0	.147	.073	.021	.144	.072	.020	.139	.070	.020	.133	.068	.020	.129	.067	.020	
8.0	.140	.069	.019	.138	.068	.019	.133	.066	.019	.128	.065	.019	.124	.063	.018	
9.0	.134	.065	.018	.132	.064	.018	.127	.063	.018	.123	.062	.018	.119	.060	.017	
10.0	.128	.061	.017	.126	.061	.017	.122	.060	.017	.118	.059	.017	.115	.058	.017	

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.067	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.138	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.057	.111	.076	.050	.077	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.105	.068	.042	.072	.048	.029	.042	.028	.017	.014	.009	.006	
7.0	.116	.071	.040	.100	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.110	.065	.034	.095	.057	.030	.066	.040	.021	.038	.023	.013	.012	.008	.004	
9.0	.105	.060	.030	.091	.052	.026	.063	.037	.019	.037	.022	.011	.012	.007	.004	
10.0	.100	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm											
NAME: BJ21-WHTC20C023P						TYPE:		WEIGHT:			
SPEC.: white RA90 3000K+5700K						DIM.:		SERIAL No.:			
MFR.:						SUR.: 65mm		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	20.5	21.5	20.7	21.7	21.9	21.2	22.3	21.4	22.4	22.6
	3H	20.5	21.5	20.8	21.7	21.9	21.3	22.2	21.5	22.4	22.6
	4H	20.6	21.5	20.9	21.7	21.9	21.3	22.2	21.6	22.5	22.7
	6H	20.7	21.5	21.0	21.8	22.0	21.4	22.3	21.7	22.5	22.8
	8H	20.7	21.5	21.0	21.8	22.1	21.5	22.3	21.8	22.6	22.9
	12H	20.7	21.5	21.1	21.8	22.1	21.6	22.3	21.9	22.6	22.9
4H	2H	20.3	21.3	20.6	21.5	21.7	21.0	22.0	21.3	22.2	22.4
	3H	20.5	21.3	20.8	21.5	21.8	21.2	22.0	21.5	22.3	22.5
	4H	20.6	21.4	21.0	21.7	22.0	21.3	22.1	21.7	22.4	22.7
	6H	20.9	21.5	21.3	21.8	22.2	21.6	22.2	22.0	22.6	22.9
	8H	21.0	21.5	21.4	21.9	22.3	21.7	22.3	22.1	22.7	23.0
	12H	21.0	21.5	21.4	21.9	22.3	21.8	22.4	22.2	22.7	23.1
8H	4H	20.7	21.2	21.1	21.6	22.0	21.3	21.9	21.7	22.3	22.6
	6H	21.0	21.5	21.4	21.9	22.3	21.7	22.2	22.1	22.6	23.0
	8H	21.2	21.6	21.6	22.0	22.4	21.9	22.3	22.3	22.7	23.2
	12H	21.2	21.6	21.7	22.1	22.5	22.1	22.4	22.5	22.9	23.3
12H	4H	20.7	21.2	21.1	21.6	22.0	21.3	21.8	21.7	22.2	22.6
	6H	21.0	21.5	21.5	21.9	22.3	21.7	22.1	22.2	22.5	23.0
	8H	21.2	21.6	21.7	22.0	22.5	21.9	22.3	22.4	22.7	23.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 1.7 / - 2.6					+ 2.0 / - 2.5					
1.5H	+ 3.0 / - 2.4					+ 3.3 / - 2.6					
2.0H	+ 2.9 / - 1.4					+ 3.5 / - 1.6					

CIE Pub.117, 1910 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.2$)
Area: 0.00332 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

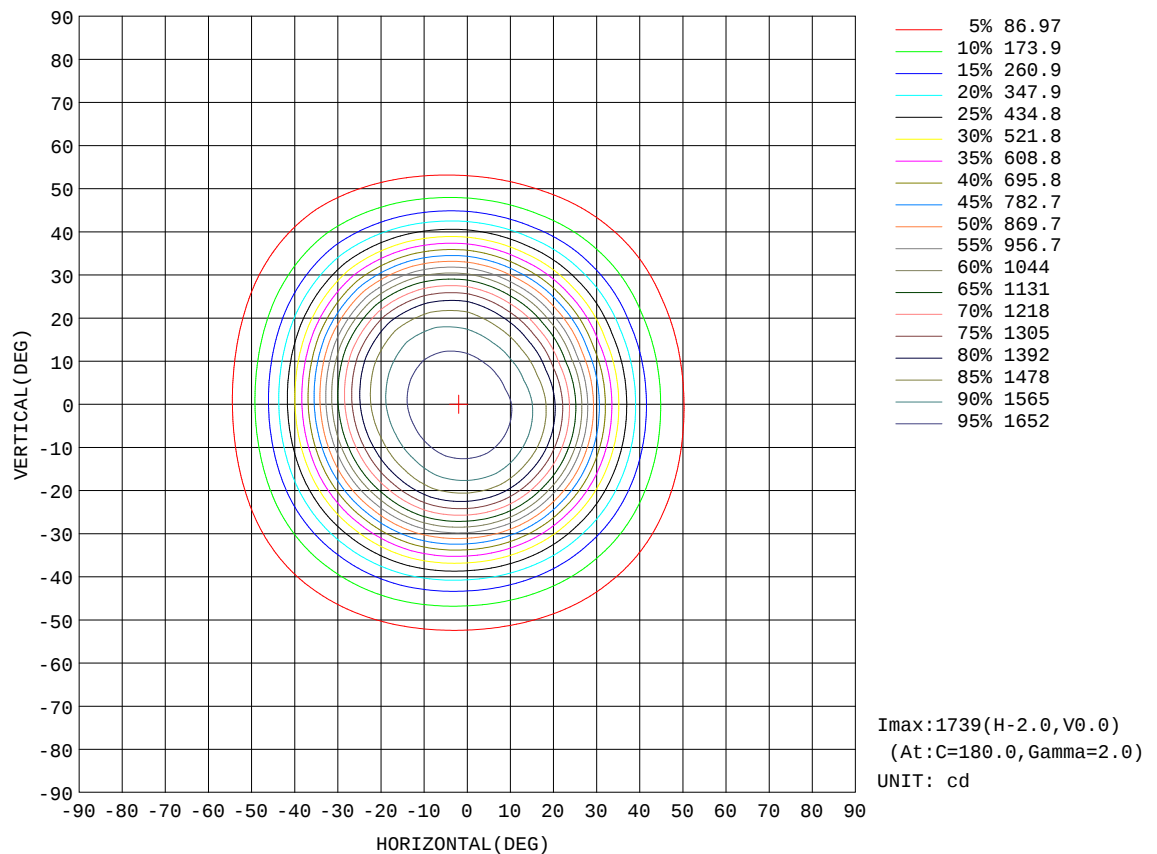
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	74	70	81	74	70	80	74	70	66
0.80	90	83	79	89	83	78	88	82	78	74
1.00	95	89	85	94	88	84	93	88	84	79
1.25	100	94	90	99	93	90	97	92	89	84
1.50	103	98	94	102	97	93	99	95	92	87
2.00	107	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	100	98	92
3.00	110	106	103	108	105	102	105	102	100	93
4.00	113	109	107	110	108	105	107	105	103	95
5.00	114	111	109	112	109	107	108	106	104	97
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:2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

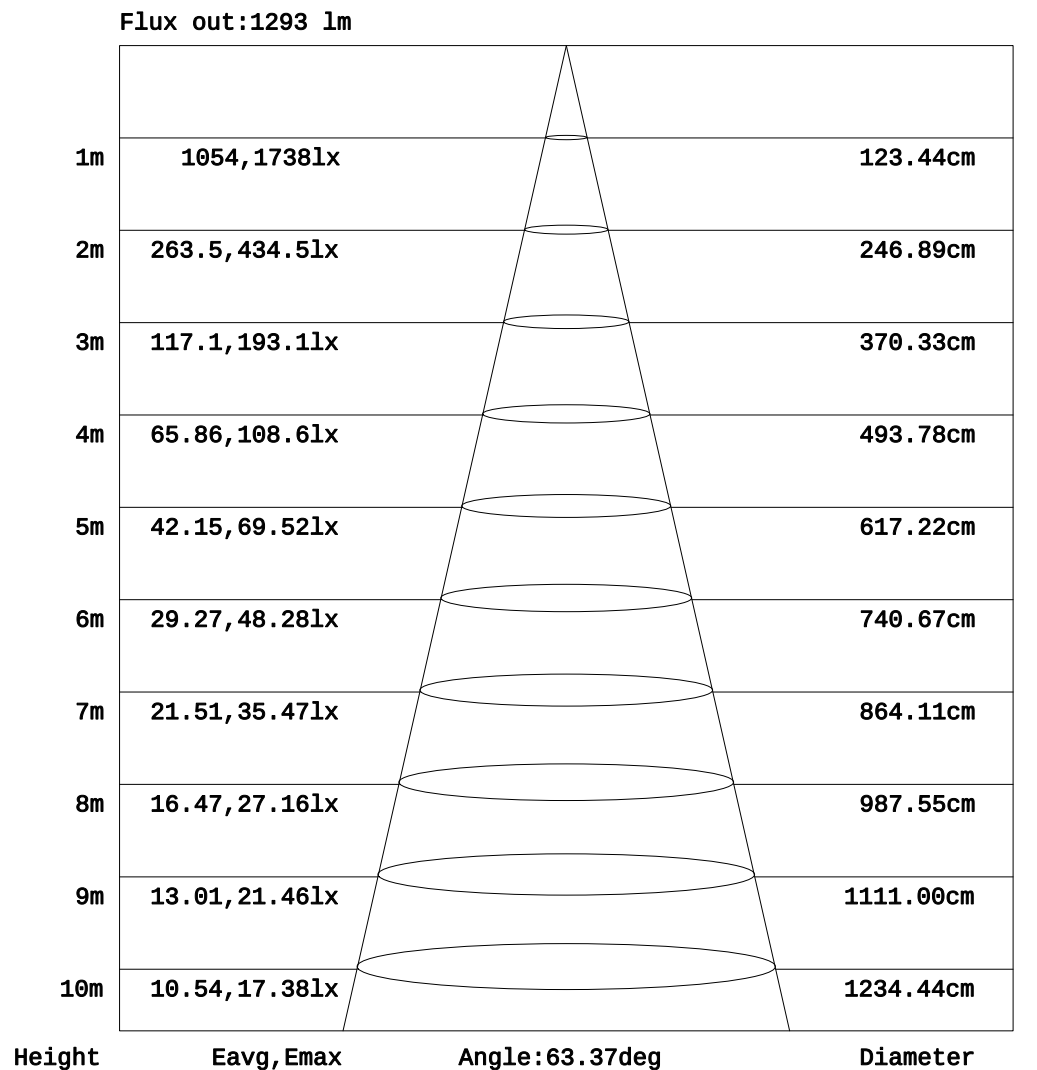


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



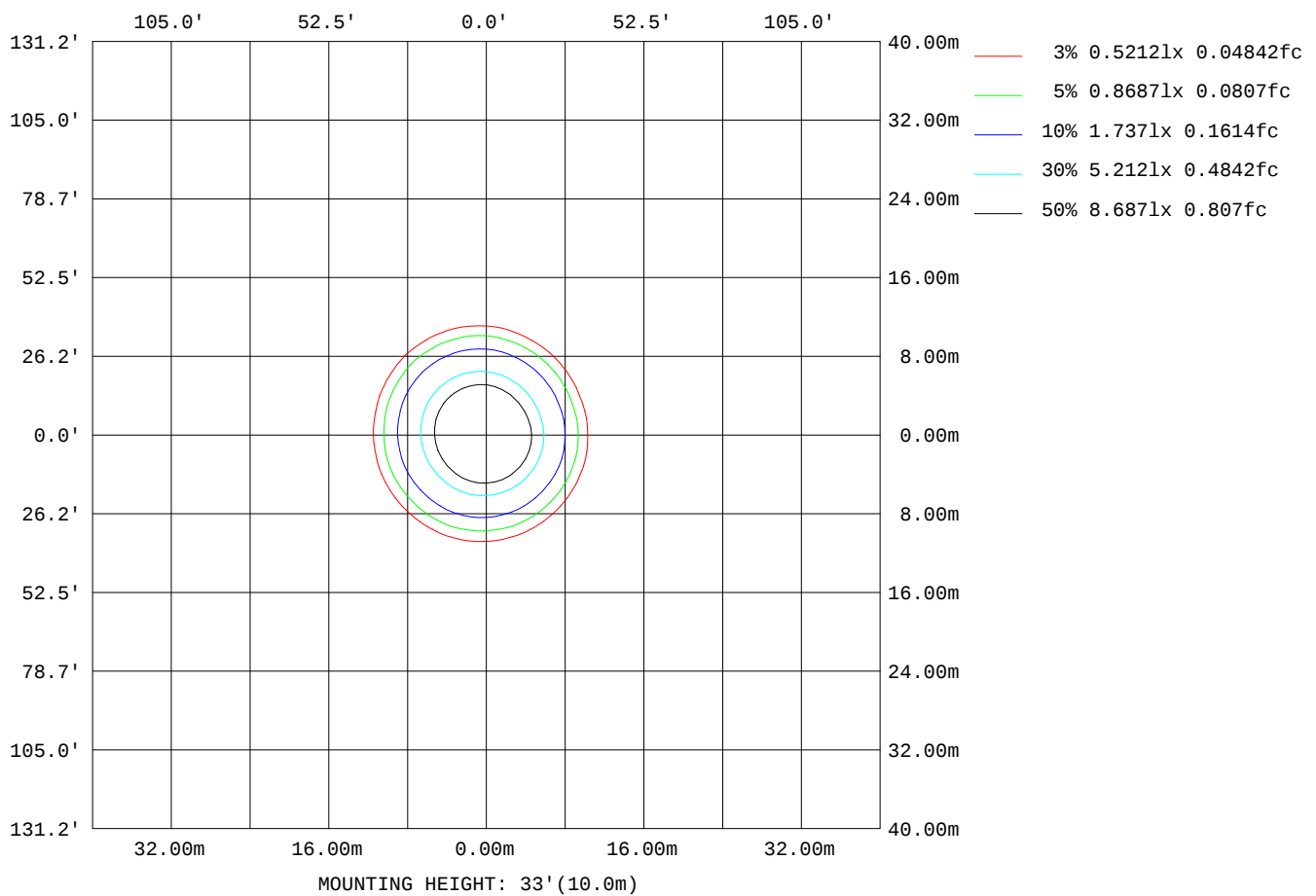
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-11-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:220.39V I:0.0922A P:18.825W PF:0.9261 Freq:50.01Hz Lamp Flux:1910.24x1 lm		
NAME: BJ21-WHTC20C023P	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

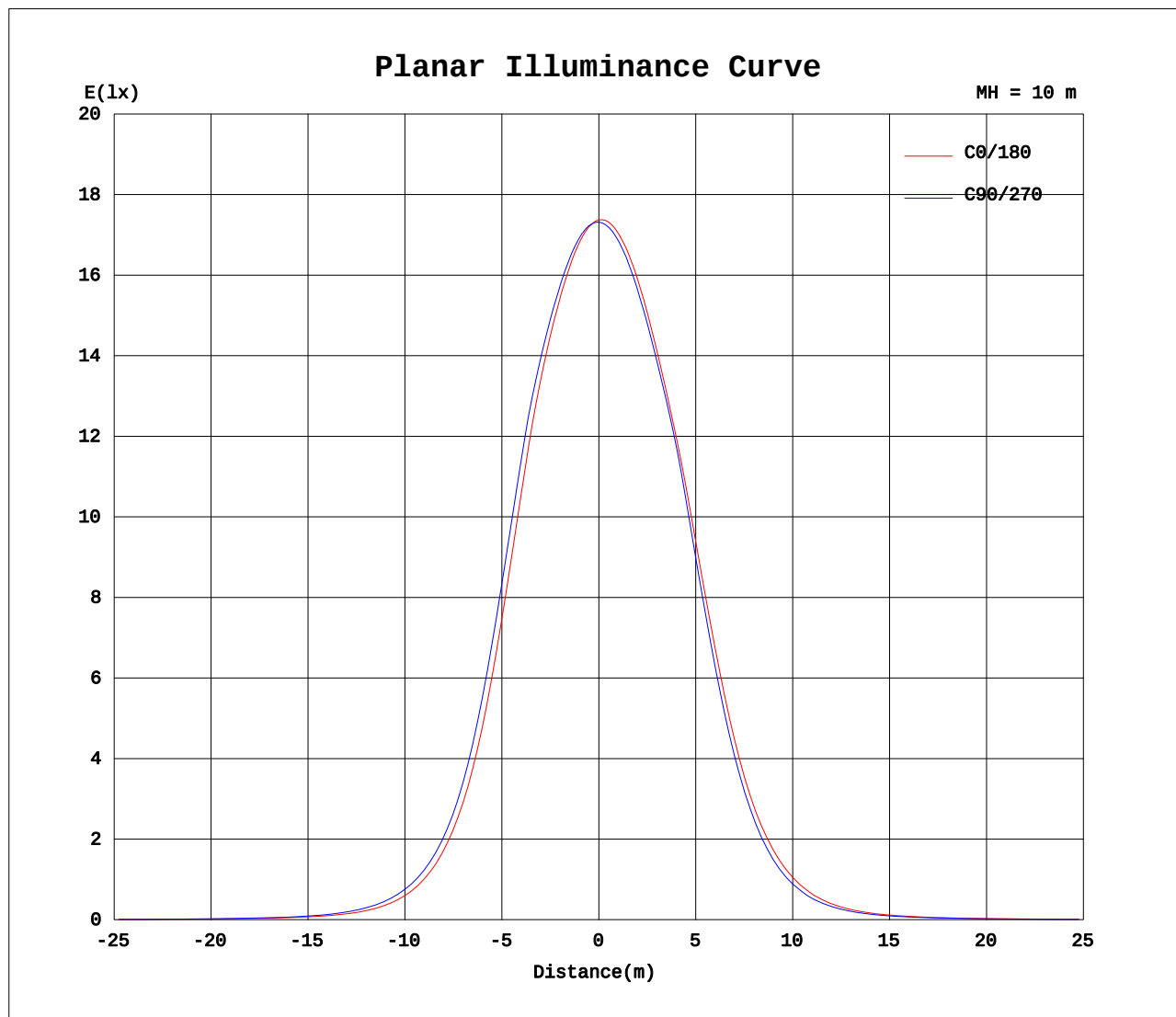
AvgL	cd/m2
L_0~180(65)av	19158
L_0~180(75)av	17980
L_0~180(85)av	23451
L_90~270(65)av	18979
L_90~270(75)av	17588
L_90~270(85)av	23505
L_45(65)av	19067
L_45(75)av	17790
L_45(85)av	23277

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-11-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [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:7.450m [K=1.0000]
Remarks:

```