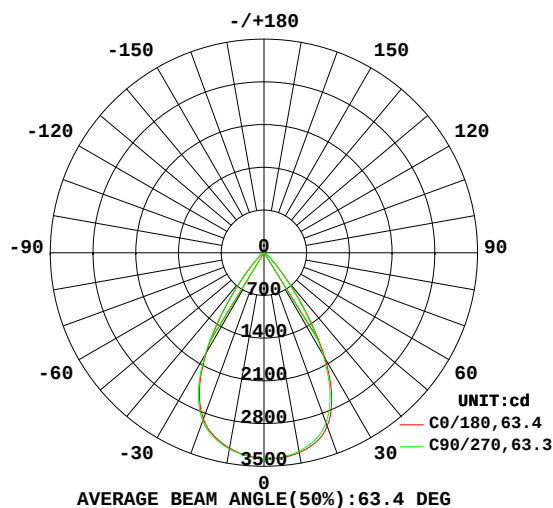


LUMINAIRE PHOTOMETRIC TEST REPORT

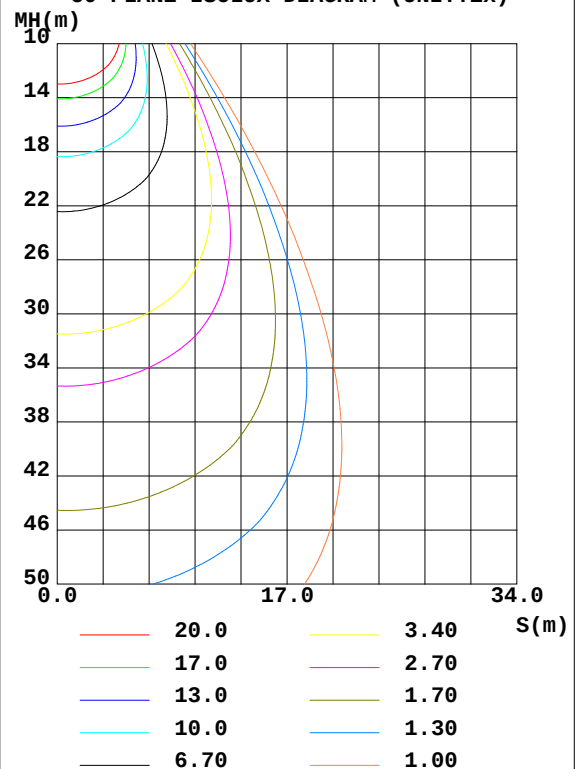
Test:U:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 107.75 lm/W			
MODEL	TB25171211 4000K	I _{max} (cd)	3379	S/MH(C0/180)	0.93
NOMINAL POWER(W)	35	LOR(%)	100.0	S/MH(C90/270)	0.93
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	3395.0	η UP, DN(C0-180)	0.0, 50.4
NOMINAL FLUX(lm)	3395.03	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.95

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: 2023-11-03

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:

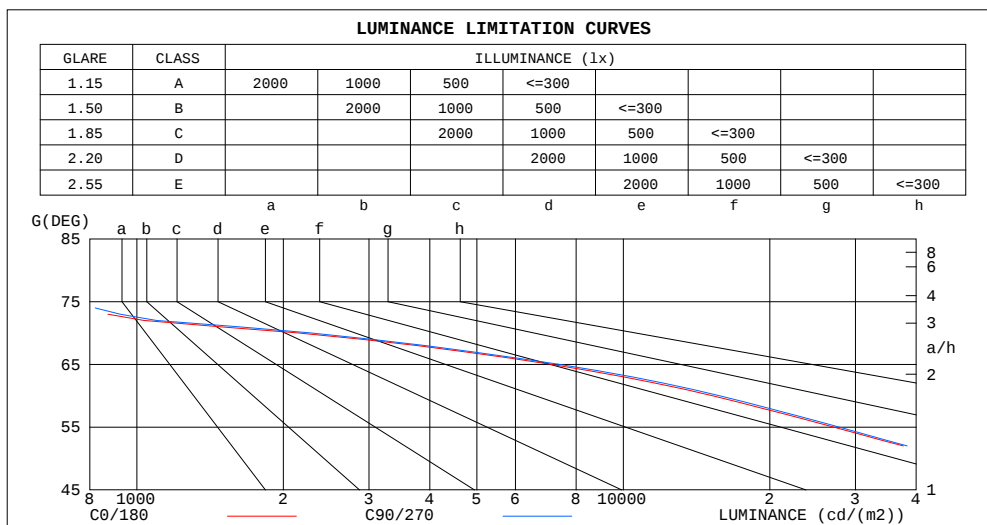
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	3325	3329	3302	3270	3251	3248	3265	3300	0- 10	317.9	317.9	9.36, 9.36
20	3025	3021	2966	2917	2902	2905	2935	2993	10- 20	889.3	1207	35.6, 35.6
30	2000	1985	1940	1889	1894	1885	1935	2002	20- 30	1153	2360	69.5, 69.5
40	596.0	593.5	576.2	553.2	555.0	547.9	566.7	602.7	30- 40	743.9	3104	91.4, 91.4
50	123.2	126.3	124.8	120.9	117.8	115.6	117.2	122.4	40- 50	215.7	3320	97.8, 97.8
60	30.99	31.83	32.04	31.53	31.29	31.03	30.77	31.47	50- 60	59.62	3380	99.5, 99.5
70	2.985	3.086	3.171	3.322	3.388	3.449	3.307	3.249	60- 70	13.98	3394	100, 100
80	0.5219	0.5336	0.4989	0.5607	0.4275	0.4041	0.4083	0.4042	70- 80	1.119	3395	100, 100
90	0.2934	0.2857	0.2895	0.2934	0.0849	0.0811	0.0811	0.0772	80- 90	0.2693	3395	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: 2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	817	762
80	739	706
75	752	771
70	2145	2278
65	7096	7367
60	15228	15746
55	27055	27748
50	47089	47698
45	90268	89413

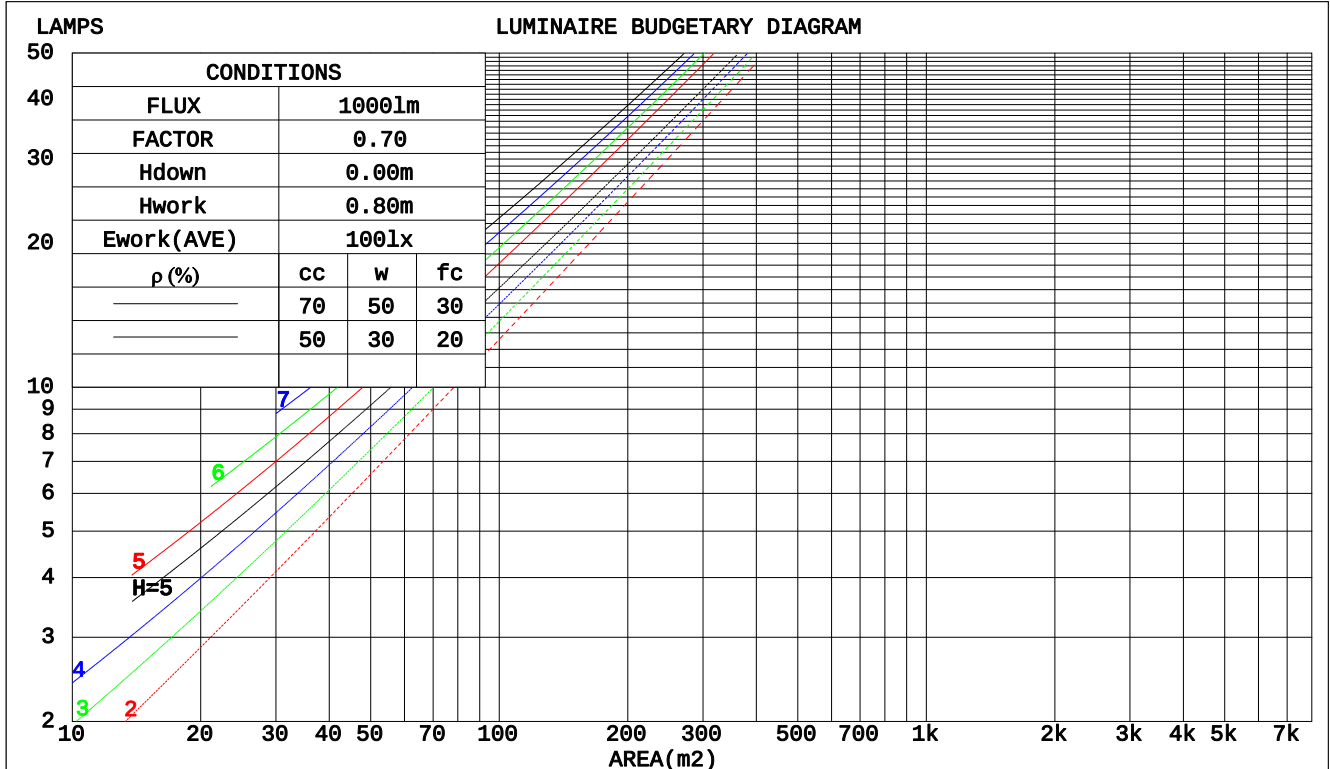
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87
3.0	.96	.91	.86	.94	.90	.86	.92	.88	.84	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.83	.79	.88	.83	.79	.86	.81	.78	.84	.80	.77	.82	.79	.76	.74
5.0	.83	.77	.73	.82	.77	.73	.80	.76	.72	.79	.75	.71	.77	.74	.71	.69
6.0	.78	.72	.67	.77	.71	.67	.76	.71	.67	.74	.70	.66	.73	.69	.66	.64
7.0	.73	.67	.63	.72	.67	.62	.71	.66	.62	.70	.65	.62	.69	.65	.61	.60
8.0	.69	.63	.58	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.56
9.0	.65	.59	.55	.64	.58	.55	.63	.58	.54	.62	.58	.54	.61	.57	.54	.53
10.0	.61	.55	.51	.61	.55	.51	.60	.55	.51	.59	.54	.51	.58	.54	.51	.49



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm					
NAME: BJ31-BKTC30C023P			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 72mm		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	.181	.103	.033	.174	.099	.031	.161	.092	.030	.150	.086	.028	.139	.081	.026	
2.0	.174	.095	.029	.168	.093	.029	.157	.088	.027	.148	.083	.026	.139	.078	.025	
3.0	.166	.088	.026	.161	.086	.026	.152	.082	.025	.144	.079	.024	.136	.075	.023	
4.0	.159	.082	.024	.154	.081	.024	.146	.078	.023	.139	.075	.023	.132	.072	.022	
5.0	.151	.077	.022	.148	.076	.022	.141	.073	.022	.134	.071	.021	.128	.069	.021	
6.0	.145	.072	.021	.141	.071	.021	.135	.069	.020	.130	.067	.020	.124	.065	.019	
7.0	.138	.068	.019	.135	.067	.019	.130	.066	.019	.125	.064	.019	.120	.063	.018	
8.0	.132	.065	.018	.130	.064	.018	.125	.062	.018	.121	.061	.018	.116	.060	.017	
9.0	.127	.061	.017	.125	.061	.017	.120	.059	.017	.116	.058	.017	.112	.057	.017	
10.0	.122	.058	.016	.120	.058	.016	.116	.057	.016	.112	.056	.016	.109	.055	.016	

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	.171	.157	.145	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.135	.099	.072	.115	.086	.062	.079	.060	.044	.046	.035	.026	.015	.011	.009		
5.0	.126	.087	.059	.108	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007		
6.0	.119	.078	.049	.102	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006		
7.0	.113	.071	.041	.097	.061	.036	.067	.043	.026	.039	.025	.015	.013	.008	.005		
8.0	.107	.065	.035	.092	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.102	.059	.031	.088	.052	.027	.061	.036	.019	.035	.021	.011	.011	.007	.004		
10.0	.097	.055	.027	.084	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm											
NAME: BJ31-BKTC30C023P						TYPE:			WEIGHT:		
SPEC.: black RA90 3000K+5700K						DIM.:			SERIAL No.:		
MFR.:						SUR.: 72mm			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		20.4	21.4	20.6	21.5	21.7	20.3	21.3	20.5	21.5	21.6
	3H	20.2	21.1	20.5	21.3	21.5	20.1	21.0	20.4	21.2	21.4
	4H	20.1	21.0	20.4	21.2	21.4	20.1	20.9	20.3	21.1	21.3
	6H	20.0	20.8	20.3	21.1	21.3	20.0	20.8	20.3	21.0	21.3
	8H	20.0	20.8	20.3	21.0	21.3	19.9	20.7	20.2	20.9	21.2
	12H	20.0	20.7	20.3	21.0	21.2	19.9	20.6	20.2	20.9	21.2
4H	2H	20.2	21.0	20.4	21.2	21.4	20.1	20.9	20.4	21.1	21.4
	3H	20.0	20.7	20.3	21.0	21.3	19.9	20.6	20.2	20.9	21.2
	4H	19.9	20.5	20.2	20.8	21.2	19.8	20.5	20.2	20.8	21.1
	6H	19.8	20.4	20.2	20.7	21.0	19.7	20.3	20.1	20.6	21.0
	8H	19.7	20.3	20.1	20.6	21.0	19.7	20.2	20.1	20.5	20.9
	12H	19.7	20.2	20.1	20.6	20.9	19.6	20.1	20.0	20.5	20.9
8H	4H	19.7	20.3	20.1	20.6	21.0	19.7	20.2	20.1	20.5	20.9
	6H	19.6	20.1	20.1	20.5	20.9	19.6	20.0	20.0	20.4	20.8
	8H	19.6	20.0	20.0	20.4	20.8	19.5	19.9	20.0	20.3	20.8
	12H	19.5	19.9	20.0	20.3	20.8	19.5	19.8	19.9	20.2	20.7
12H	4H	19.7	20.2	20.1	20.6	20.9	19.6	20.1	20.0	20.5	20.9
	6H	19.6	20.0	20.0	20.4	20.8	19.5	19.9	20.0	20.3	20.8
	8H	19.5	19.9	20.0	20.3	20.8	19.5	19.8	19.9	20.2	20.7
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 3.3 / - 9.9					+ 3.2 / - 9.6					
1.5H	+ 5.3 / - 7.1					+ 5.1 / - 7.0					
2.0H	+ 5.5 / - 7.7					+ 5.4 / - 7.6					

CIE Pub.117, 3395 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.2)
Area: 0.00407 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

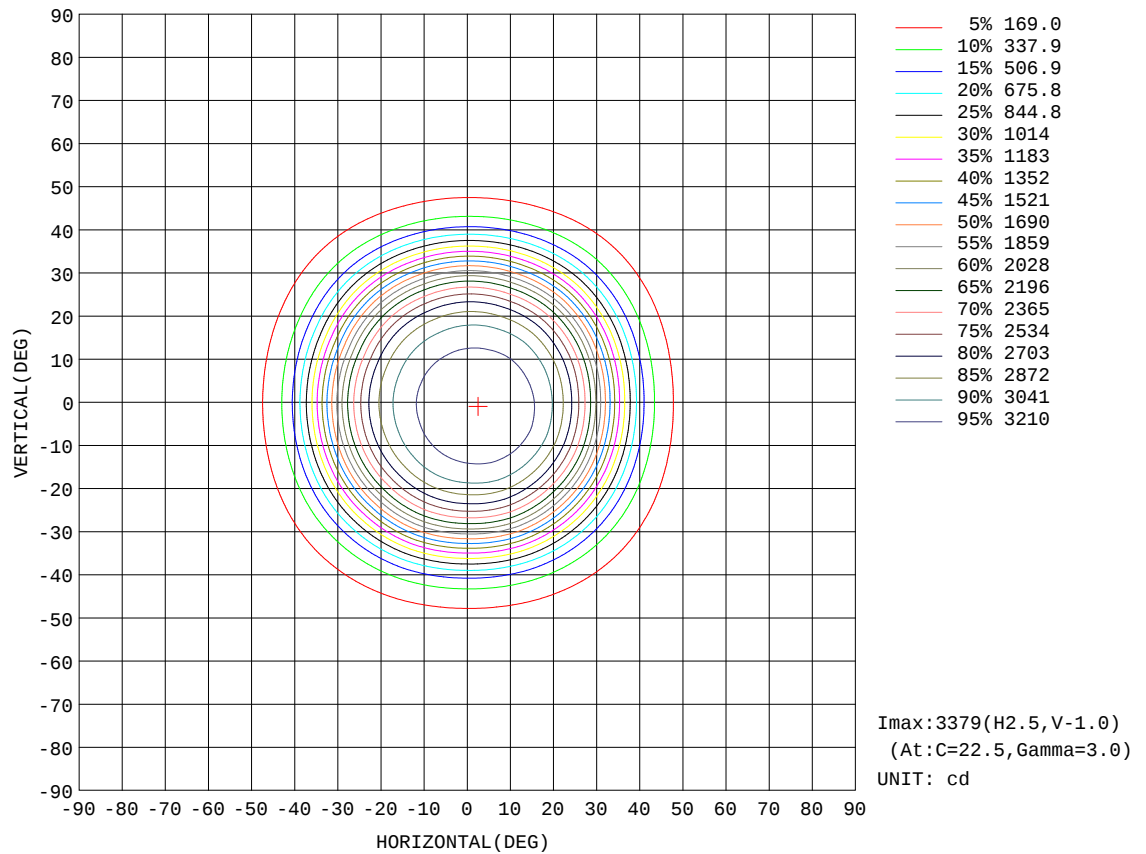
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	76	86	79	75	85	79	75	72
0.80	94	88	84	93	87	84	92	87	83	80
1.00	99	93	89	98	92	89	96	92	88	84
1.25	103	97	94	102	97	94	100	96	93	89
1.50	106	101	97	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	99	93
2.50	110	106	103	108	105	102	105	103	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	105	97
5.00	115	113	111	113	111	109	109	107	106	98
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:2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

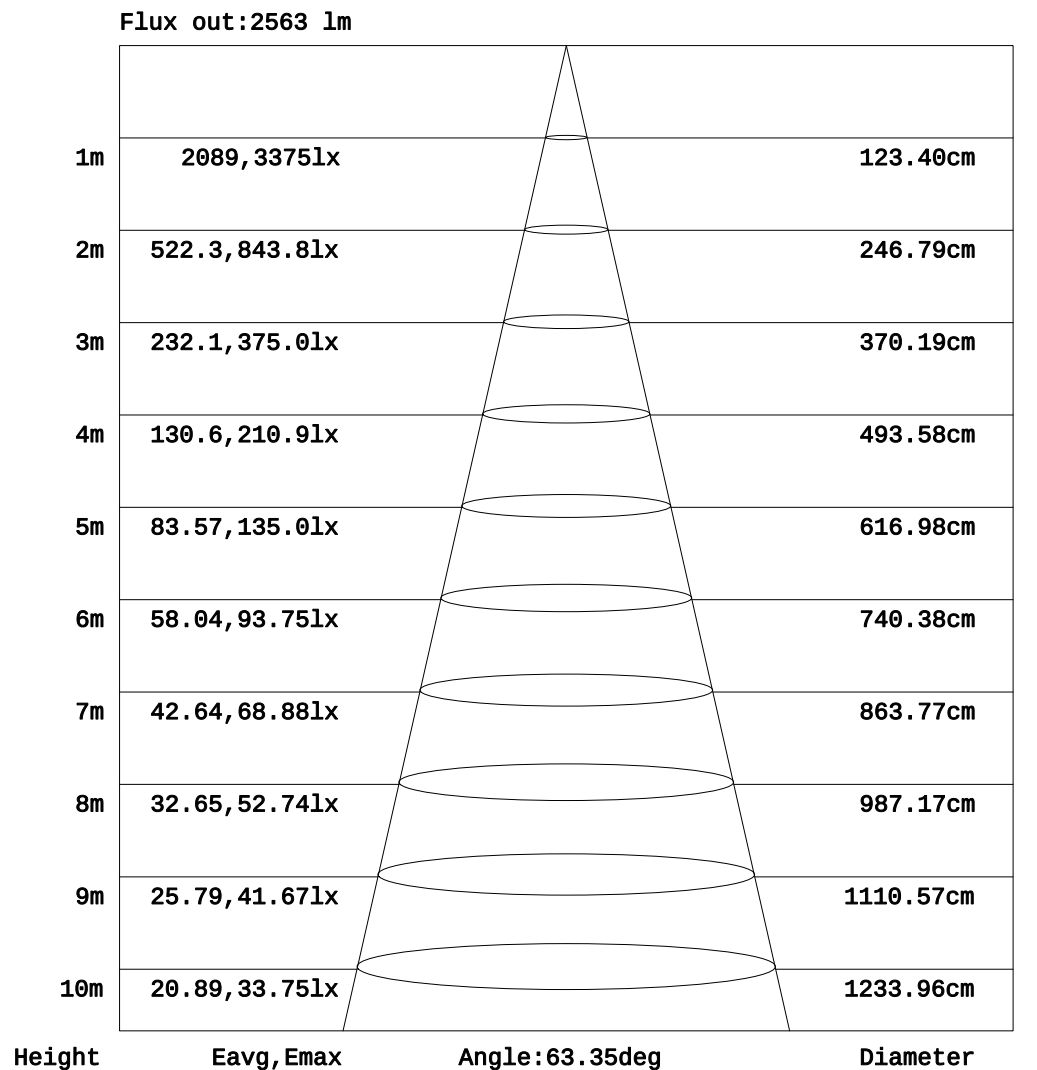


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:



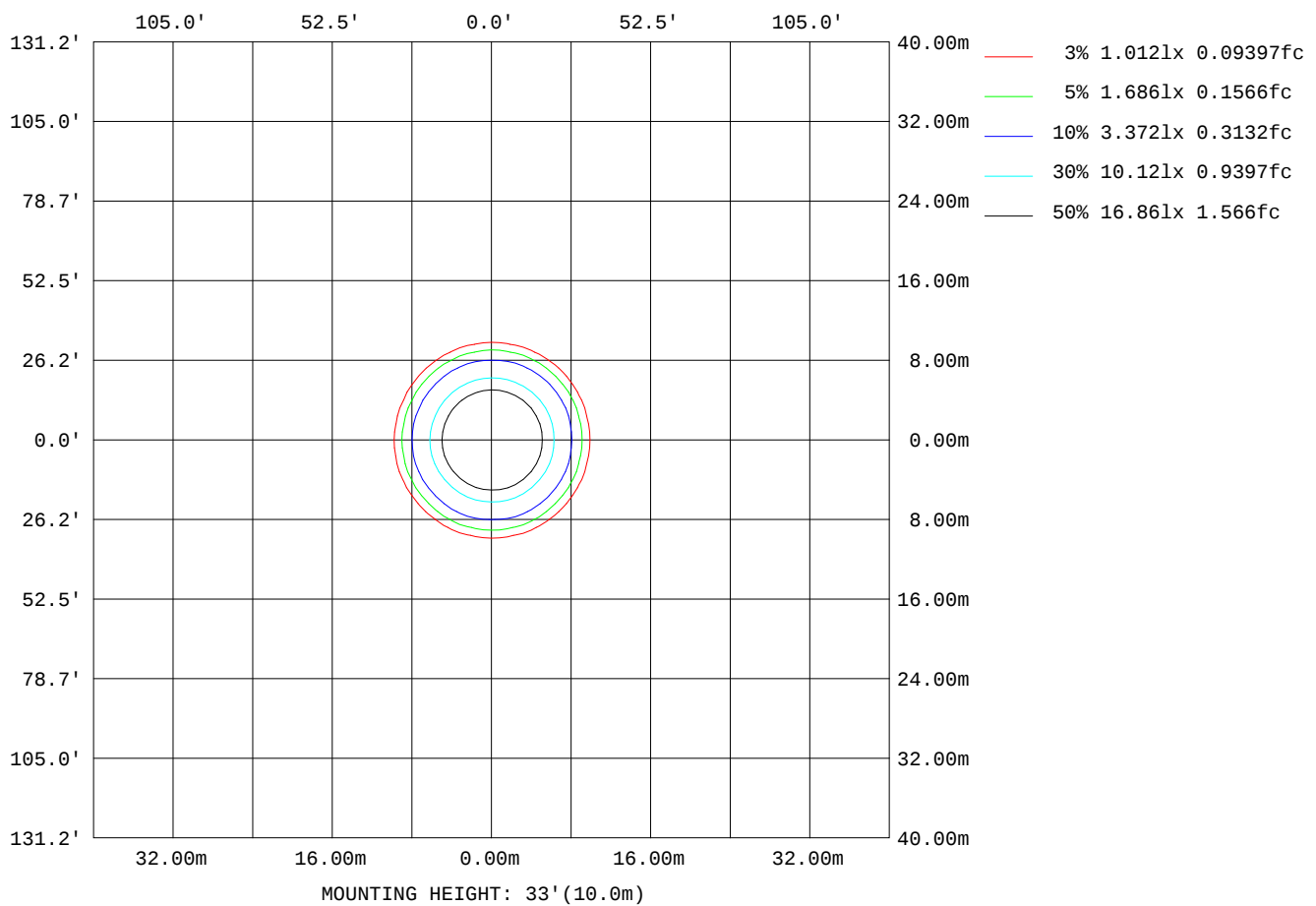
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2023-11-03

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:220.41V I:0.1464A P:31.510W PF:0.9762 Freq:50.01Hz Lamp Flux:3395.03x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

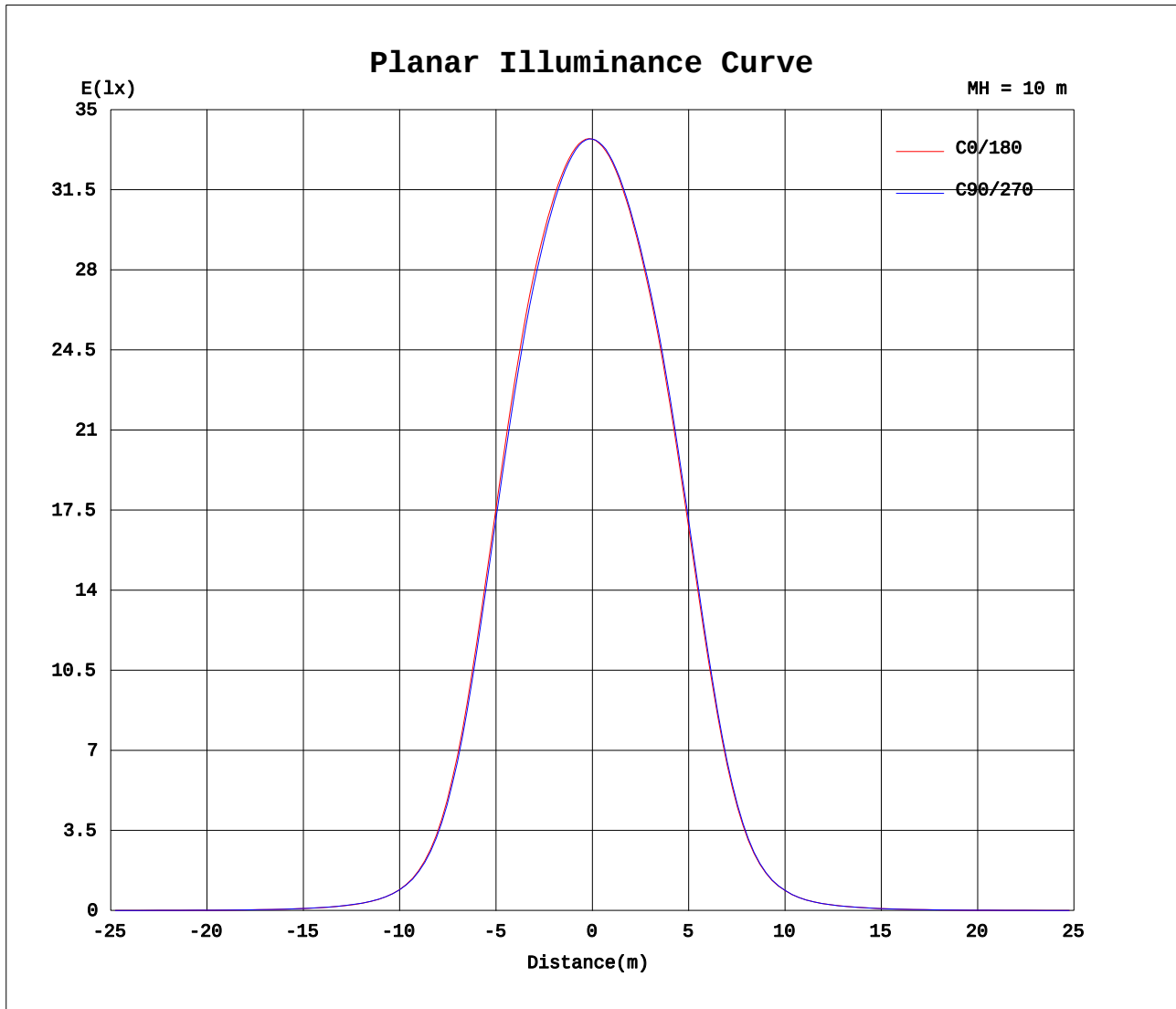
AvgL	cd/m2
L_0~180(65)av	7260
L_0~180(75)av	726
L_0~180(85)av	599
L_90~270(65)av	7368
L_90~270(75)av	726
L_90~270(85)av	555
L_45(65)av	7386
L_45(75)av	750
L_45(85)av	566

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2023-11-03

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: 2023-11-03

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:

```