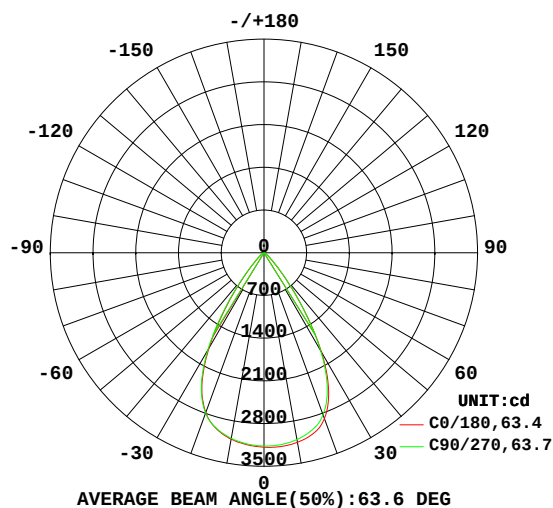


LUMINAIRE PHOTOMETRIC TEST REPORT

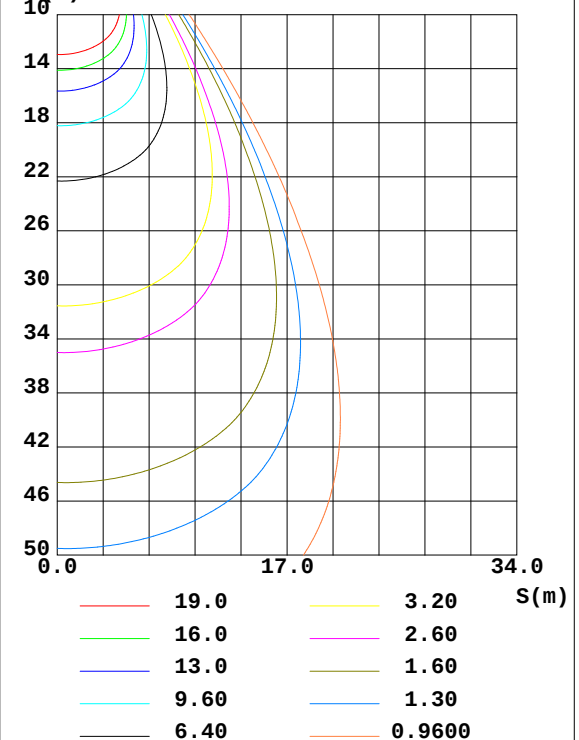
Test:U:220.41V I:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.47 lm/W			
MODEL	TB25171211 5700K	I _{max} (cd)	3190	S/MH(C0/180)	0.92
NOMINAL POWER(W)	35	LOR(%)	100.0	S/MH(C90/270)	0.93
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	3220.2	η UP, DN(C0-180)	0.0, 50.3
NOMINAL FLUX(lm)	3220.18	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.7
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: MEDIUM
Temperature: 25DEG
Operators:
Test Date: 2023-11-03

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:

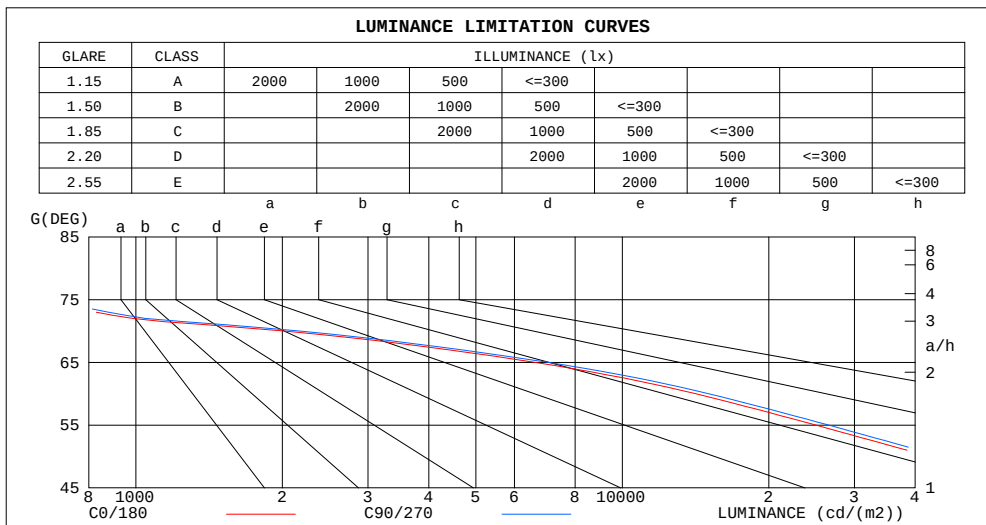
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	3155	3149	3109	3078	3102	3095	3087	3104	0- 10	299.9	299.9	9.31,9.31
20	2894	2878	2827	2787	2789	2783	2797	2847	10- 20	845.8	1146	35.6,35.6
30	1890	1869	1864	1846	1805	1775	1843	1931	20- 30	1103	2248	69.8,69.8
40	540.7	516.5	553.7	549.3	510.8	477.8	536.6	586.6	30- 40	702.5	2951	91.6,91.6
50	112.9	110.9	119.8	117.4	108.8	101.7	110.9	118.4	40- 50	199.5	3150	97.8,97.8
60	28.79	28.54	30.57	30.55	29.01	27.84	28.98	30.13	50- 60	55.48	3206	99.6,99.6
70	2.799	2.798	3.008	3.189	3.138	3.115	3.103	3.091	60- 70	13.03	3219	100,100
80	0.4948	0.4949	0.4717	0.5299	0.4041	0.3544	0.3815	0.3660	70- 80	1.041	3220	100,100
90	0.2548	0.2393	0.2548	0.2818	0.0733	0.0695	0.0733	0.0695	80- 90	0.2473	3220	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: MEDIUM
 Temperature:25DEG
 Operators:
 Test Date:2023-11-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 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	762	729
80	700	667
75	708	727
70	2011	2161
65	6597	7028
60	14145	15024
55	24997	26558
50	43165	45801
45	81505	85742

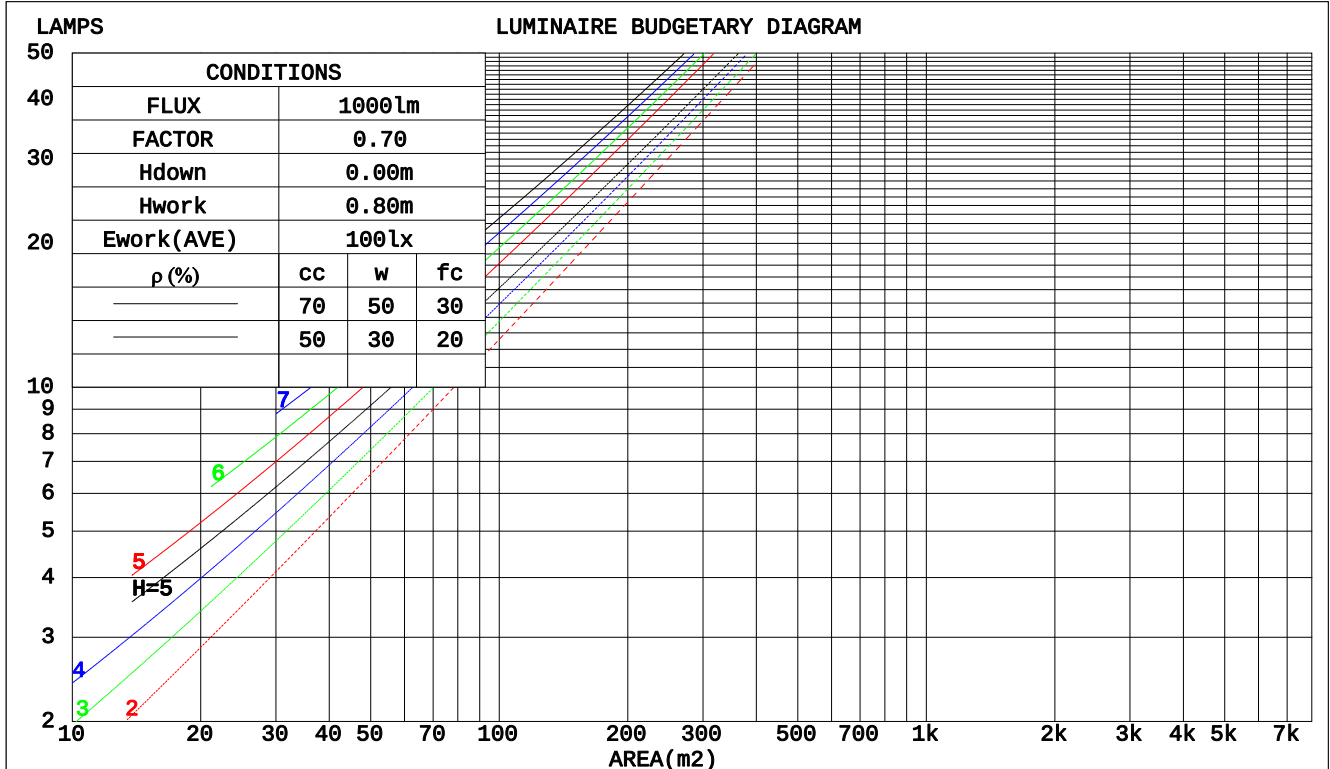
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25DEG
Operators:
Test Date: 2023-11-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 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	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	.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	.87	.94	.90	.86	.92	.88	.84	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.79	.88	.83	.79	.86	.81	.78	.84	.80	.77	.82	.79	.76	.74
5.0	.83	.77	.73	.82	.77	.73	.81	.76	.72	.79	.75	.71	.77	.74	.71	.69
6.0	.78	.72	.68	.77	.71	.67	.76	.71	.67	.74	.70	.66	.73	.69	.66	.64
7.0	.73	.67	.63	.72	.67	.63	.71	.66	.62	.70	.65	.62	.69	.65	.62	.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	.59	.55	.63	.58	.54	.62	.58	.54	.62	.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: MEDIUM
Temperature: 25DEG
Operators:
Test Date: 2023-11-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 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	.180	.103	.032	.174	.099	.031	.161	.092	.029	.149	.086	.028	.139	.080	.026	
2.0	.174	.095	.029	.168	.092	.028	.157	.087	.027	.147	.083	.026	.138	.078	.025	
3.0	.166	.088	.026	.161	.086	.026	.152	.082	.025	.144	.079	.024	.136	.075	.023	
4.0	.158	.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	.144	.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	.062	.018	
8.0	.132	.065	.018	.130	.064	.018	.125	.062	.018	.120	.061	.018	.116	.060	.017	
9.0	.127	.061	.017	.125	.061	.017	.120	.059	.017	.116	.058	.017	.112	.057	.016	
10.0	.122	.058	.016	.120	.058	.016	.116	.057	.016	.112	.056	.016	.109	.055	.016	

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	.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	.134	.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	.036	.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: MEDIUM
Temperature:25DEG
Operators:
Test Date:2023-11-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 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	20.1	21.1	20.4	21.3	21.4	20.2	21.2	20.4	21.3	21.5	
	3H	20.0	20.9	20.2	21.1	21.3	20.0	20.9	20.3	21.1	21.3
	4H	19.9	20.7	20.1	20.9	21.2	19.9	20.8	20.2	21.0	21.2
	6H	19.8	20.6	20.1	20.8	21.1	19.9	20.6	20.2	20.9	21.1
	8H	19.7	20.5	20.0	20.7	21.0	19.8	20.6	20.1	20.8	21.1
	12H	19.7	20.4	20.0	20.7	21.0	19.8	20.5	20.1	20.8	21.0
4H	2H	19.9	20.7	20.2	21.0	21.2	20.0	20.8	20.2	21.0	21.3
	3H	19.7	20.4	20.0	20.7	21.0	19.8	20.5	20.1	20.8	21.1
	4H	19.6	20.3	20.0	20.6	20.9	19.7	20.4	20.0	20.7	21.0
	6H	19.5	20.1	19.9	20.4	20.8	19.6	20.2	20.0	20.5	20.9
	8H	19.5	20.0	19.9	20.4	20.7	19.6	20.1	19.9	20.4	20.8
	12H	19.4	19.9	19.8	20.3	20.7	19.5	20.0	19.9	20.4	20.7
8H	4H	19.5	20.0	19.9	20.4	20.7	19.6	20.1	19.9	20.4	20.8
	6H	19.4	19.8	19.8	20.2	20.6	19.4	19.9	19.9	20.3	20.7
	8H	19.3	19.7	19.8	20.1	20.6	19.4	19.8	19.8	20.2	20.6
	12H	19.3	19.6	19.7	20.0	20.5	19.3	19.7	19.8	20.1	20.6
12H	4H	19.4	19.9	19.8	20.3	20.7	19.5	20.0	19.9	20.4	20.7
	6H	19.3	19.7	19.8	20.1	20.6	19.4	19.8	19.8	20.2	20.6
	8H	19.3	19.6	19.7	20.0	20.5	19.3	19.7	19.8	20.1	20.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 3.5 / - 9.7					+ 3.4 / - 9.6					
1.5H	+ 5.5 / - 7.1					+ 5.4 / - 7.2					
2.0H	+ 5.6 / - 7.6					+ 5.6 / - 7.7					

CIE Pub.117, 3220 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.1)
Area: 0.00407 m2

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

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

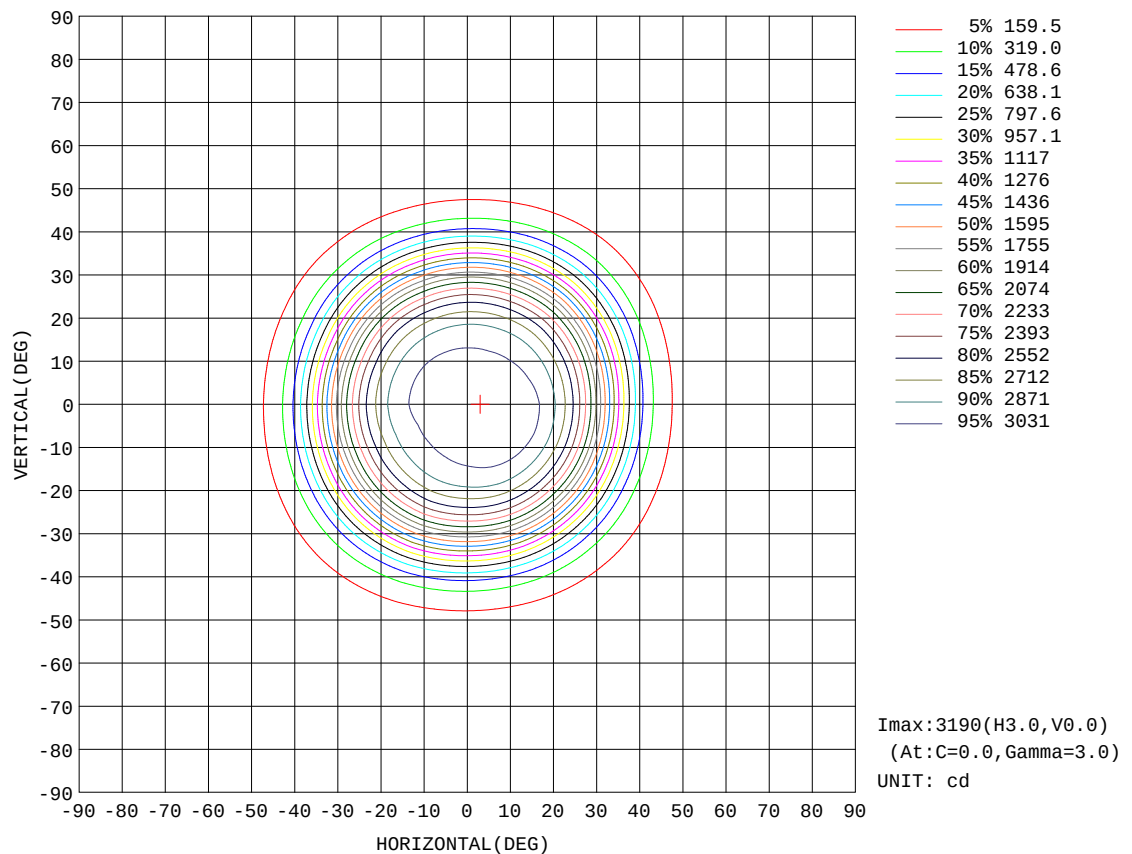
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	80	76	86	79	76	85	79	76	72
0.80	94	88	84	93	88	84	92	87	84	80
1.00	99	93	89	98	93	89	96	92	88	84
1.25	103	98	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	94
2.50	110	106	103	108	105	102	105	103	100	95
3.00	112	108	106	110	107	104	107	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: MEDIUM
Temperature:25DEG
Operators:
Test Date:2023-11-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

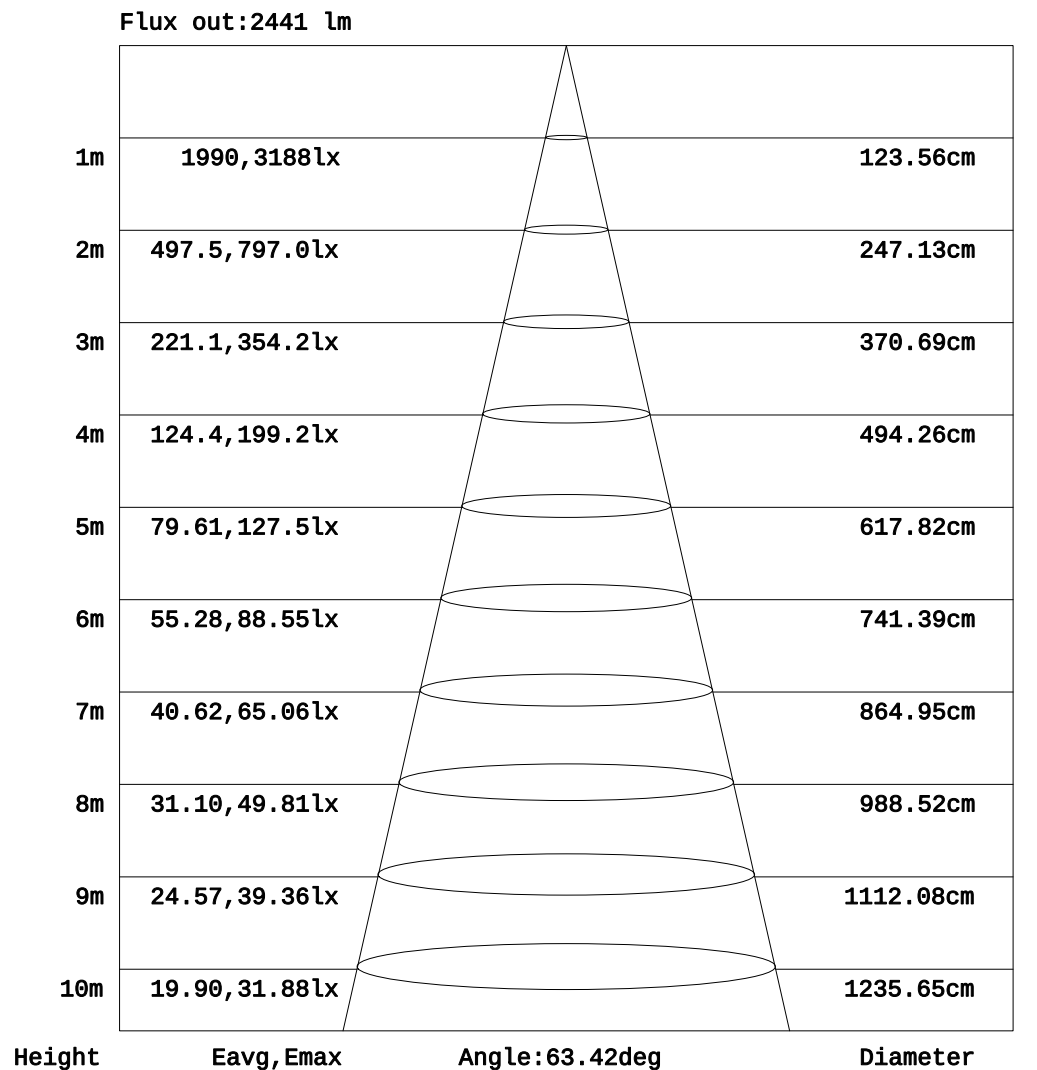


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25DEG
Operators:
Test Date:2023-11-03

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:



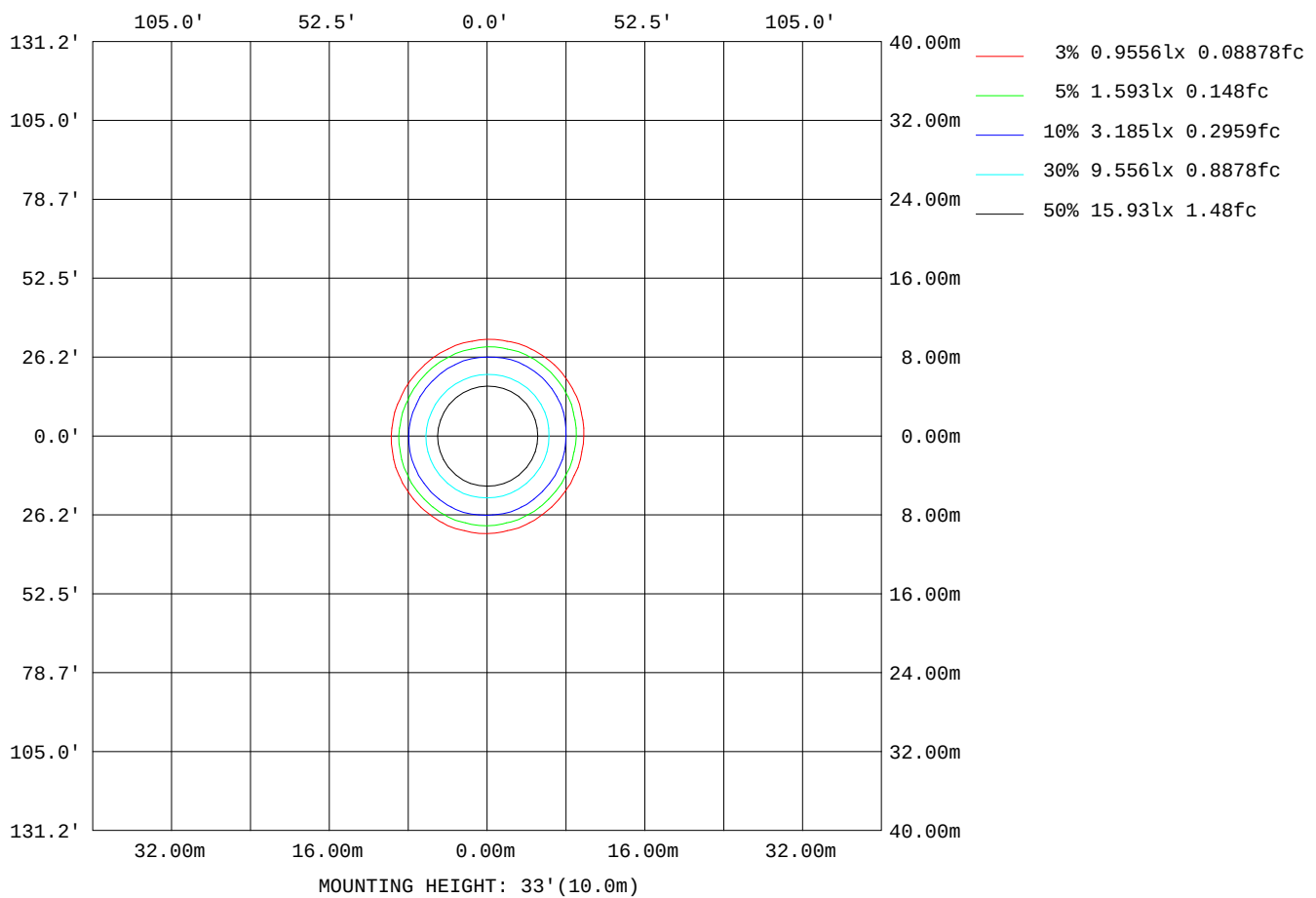
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 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: MEDIUM
Temperature:25DEG
Operators:
Test Date:2023-11-03

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:0.1579A P:34.086W PF:0.9793 Freq:50.01Hz Lamp Flux:3220.18x1 lm		
NAME: BJ31-BKTC30C023P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 72mm	Shielding Angle:

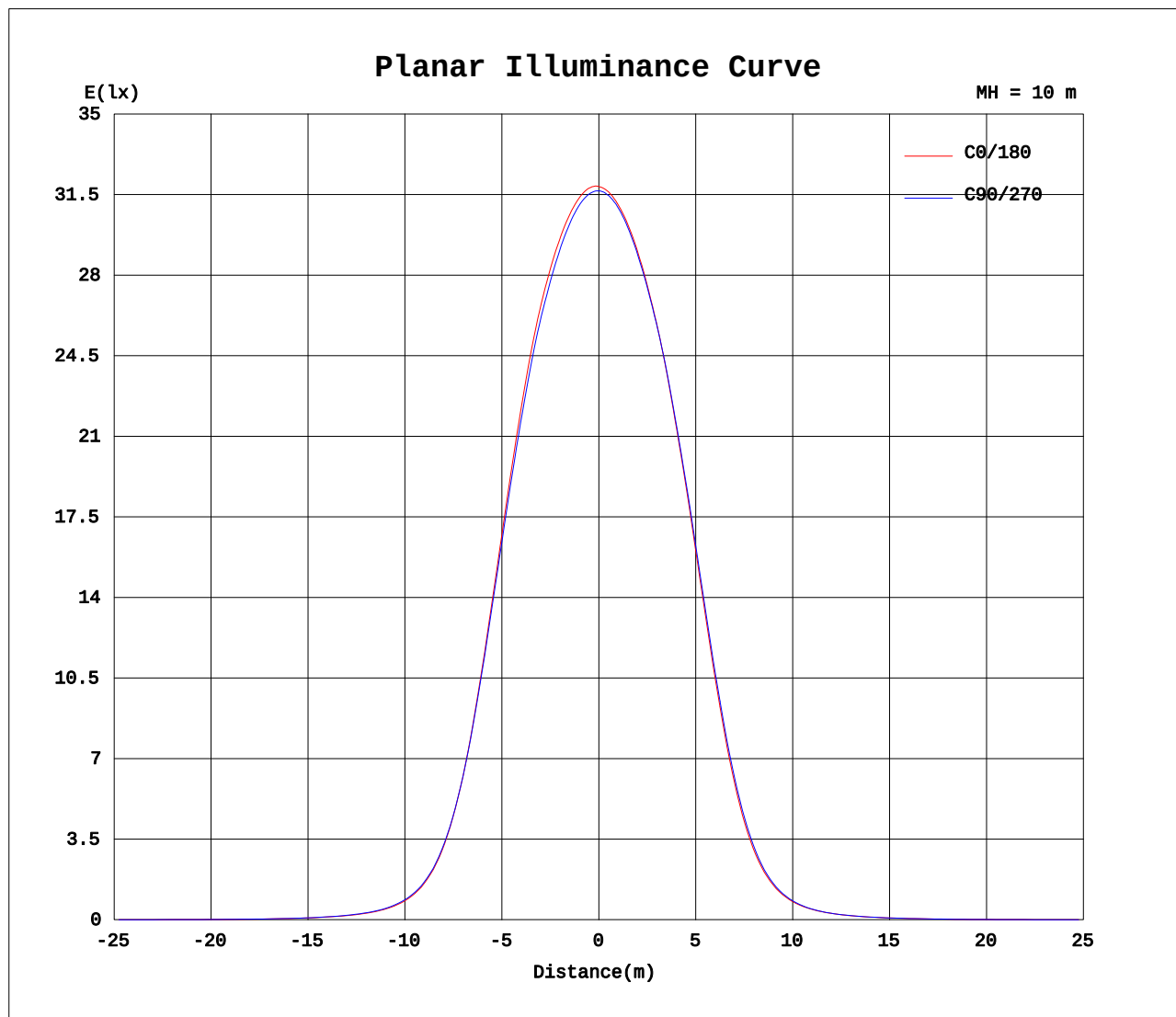
AvgL	cd/m2
L_0~180(65)av	6727
L_0~180(75)av	680
L_0~180(85)av	549
L_90~270(65)av	6975
L_90~270(75)av	680
L_90~270(85)av	517
L_45(65)av	6863
L_45(75)av	701
L_45(85)av	522

Standard: GB/T 29293-2012

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

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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: MEDIUM
Temperature: 25DEG
Operators:
Test Date: 2023-11-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

```