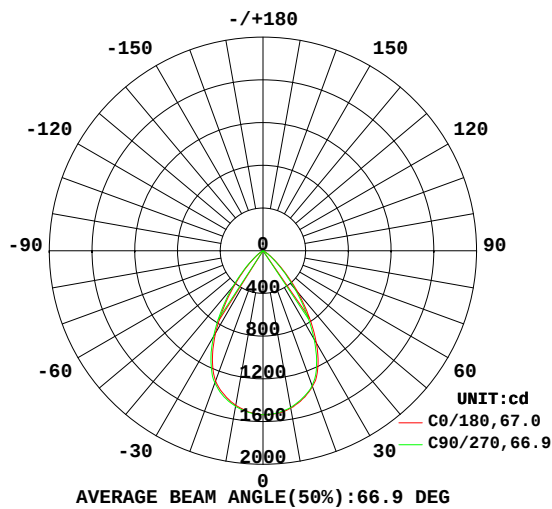


LUMINAIRE PHOTOMETRIC TEST REPORT

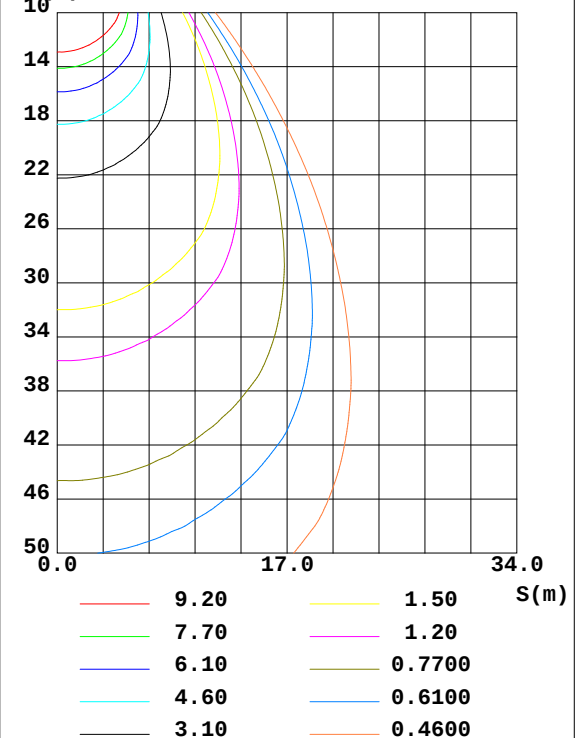
Test:U:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 97.02 lm/W			
MODEL	4000K	I _{max} (cd)	1537	S/MH(C0/180)	0.96
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.98
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1780.1	η UP, DN(C0-180)	0.0, 51.2
NOMINAL FLUX(lm)	1780.13	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.05

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: 2024-05-23

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:

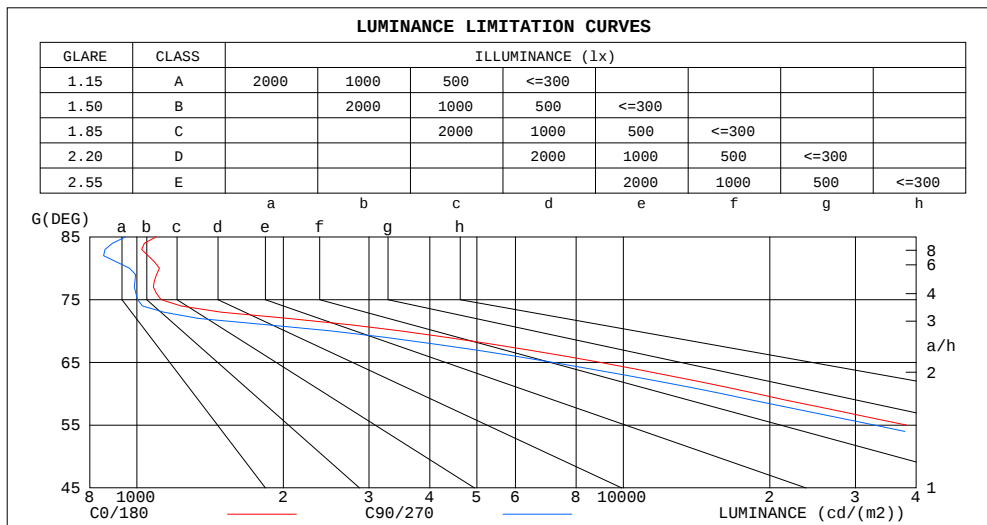
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1495	1496	1491	1479	1470	1474	1480	1489	0- 10	144.1	144.1	8.09, 8.09
20	1353	1365	1345	1319	1299	1303	1317	1335	10- 20	399.1	543.2	30.5, 30.5
30	1003	1003	958.9	918.9	887.2	896.7	928.4	967.1	20- 30	531.3	1074	60.4, 60.4
40	506.0	498.3	463.5	430.0	402.2	410.3	439.1	474.8	30- 40	429.8	1504	84.5, 84.5
50	156.7	154.8	137.9	121.3	108.0	109.2	121.8	138.8	40- 50	206.3	1711	96.1, 96.1
60	31.21	31.14	26.48	22.17	18.82	19.40	22.44	26.60	50- 60	57.62	1768	99.3, 99.3
70	3.958	3.687	2.848	2.047	1.454	1.697	2.269	2.966	60- 70	10.67	1779	99.9, 99.9
80	0.6414	0.5565	0.5567	0.4487	0.2579	0.3467	0.4158	0.4468	70- 80	1.052	1780	100, 100
90	0.2278	0.2162	0.2200	0.2316	0.0540	0.0579	0.0425	0.0386	80- 90	0.2447	1780	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: 2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1096	949
80	1113	966
75	1121	1003
70	3485	2508
65	8945	7143
60	18799	15953
55	38199	32820
50	73431	64629
45	127723	114179

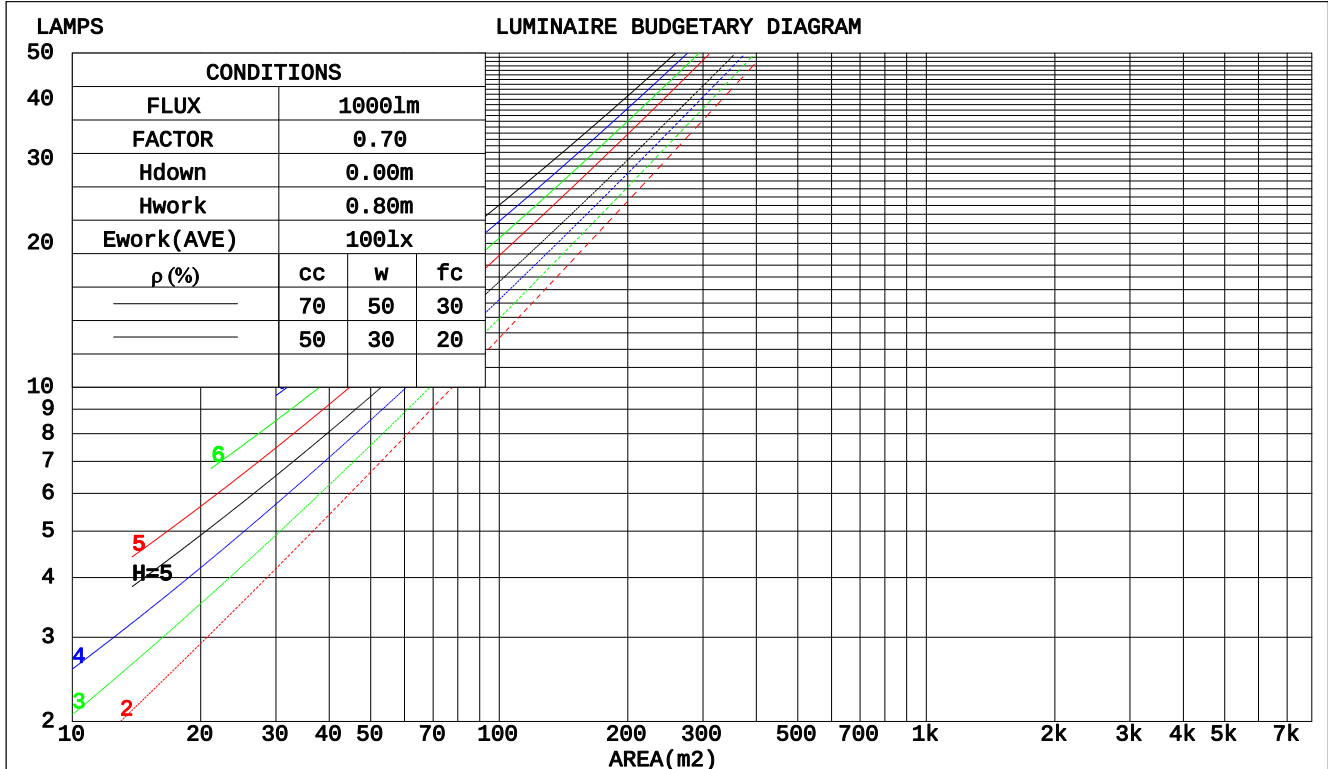
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black 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	1.05	1.08	1.06	1.03	1.04	1.02	1.00	1.00	.99	.97	.97	.95	.94	.93
2.0	1.02	.97	.94	.90	.96	.92	.97	.93	.90	.94	.91	.88	.91	.89	.87	.85
3.0	.94	.88	.84	.92	.87	.83	.90	.86	.82	.87	.84	.81	.85	.82	.80	.78
4.0	.87	.81	.76	.86	.80	.76	.83	.79	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.81	.74	.69	.80	.74	.69	.78	.73	.69	.76	.71	.68	.74	.70	.67	.66
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	.54	.65	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.53	.52
9.0	.61	.55	.50	.61	.54	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.48
10.0	.57	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.54	.50	.46	.45



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm					
NAME: BJ20-BKC20C02			TYPE:		WEIGHT:
SPEC.: black 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	.191	.109	.034	.184	.105	.033	.171	.098	.031	.160	.092	.030	.149	.086	.028	
2.0	.185	.101	.031	.179	.099	.030	.169	.094	.029	.159	.089	.028	.150	.085	.027	
3.0	.177	.094	.028	.172	.092	.028	.163	.088	.027	.155	.085	.026	.147	.081	.025	
4.0	.169	.088	.026	.165	.086	.026	.157	.083	.025	.150	.080	.024	.143	.078	.024	
5.0	.162	.082	.024	.158	.081	.024	.151	.079	.023	.144	.076	.023	.138	.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	.021	.139	.070	.020	.134	.069	.020	.129	.067	.020	
8.0	.141	.069	.019	.138	.068	.019	.133	.067	.019	.129	.065	.019	.124	.064	.019	
9.0	.135	.065	.018	.132	.064	.018	.128	.063	.018	.124	.062	.018	.120	.061	.018	
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.017	

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.057	.111	.076	.050	.076	.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	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.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:2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm										
NAME: BJ20-BKC20C02					TYPE:			WEIGHT:		
SPEC.: black 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	23.7	24.7	23.9	24.9	25.1	23.3	24.4	23.6	24.6	24.7
3H	23.5	24.5	23.8	24.7	24.9	23.2	24.1	23.4	24.3	24.5
4H	23.4	24.3	23.7	24.6	24.8	23.1	24.0	23.4	24.2	24.4
6H	23.3	24.2	23.6	24.4	24.7	23.0	23.8	23.3	24.1	24.3
8H	23.3	24.1	23.6	24.4	24.6	22.9	23.7	23.2	24.0	24.3
12H	23.2	24.0	23.6	24.3	24.6	22.9	23.7	23.2	23.9	24.2
4H 2H	23.5	24.4	23.7	24.6	24.8	23.1	24.0	23.4	24.2	24.5
3H	23.3	24.1	23.6	24.3	24.6	22.9	23.7	23.3	24.0	24.3
4H	23.2	23.9	23.5	24.2	24.5	22.8	23.6	23.2	23.9	24.2
6H	23.1	23.7	23.5	24.0	24.4	22.8	23.4	23.1	23.7	24.1
8H	23.0	23.6	23.4	24.0	24.3	22.7	23.3	23.1	23.6	24.0
12H	23.0	23.5	23.4	23.9	24.3	22.7	23.2	23.1	23.5	23.9
8H 4H	23.0	23.6	23.4	24.0	24.3	22.7	23.3	23.1	23.6	24.0
6H	23.0	23.4	23.4	23.8	24.2	22.6	23.1	23.0	23.5	23.9
8H	22.9	23.3	23.3	23.7	24.2	22.6	23.0	23.0	23.4	23.8
12H	22.8	23.2	23.3	23.6	24.1	22.5	22.9	23.0	23.3	23.8
12H 4H	23.0	23.5	23.4	23.9	24.3	22.7	23.2	23.1	23.5	23.9
6H	22.9	23.3	23.3	23.7	24.2	22.6	23.0	23.0	23.4	23.8
8H	22.8	23.2	23.3	23.6	24.1	22.5	22.9	23.0	23.3	23.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.4 / - 7.9					+ 2.4 / - 8.5				
1.5H	+ 3.4 / - 5.6					+ 3.3 / - 5.6				
2.0H	+ 5.4 / - 8.9					+ 5.2 / - 8.9				

CIE Pub.117, 1780 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.0)
Area: 0.00332 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

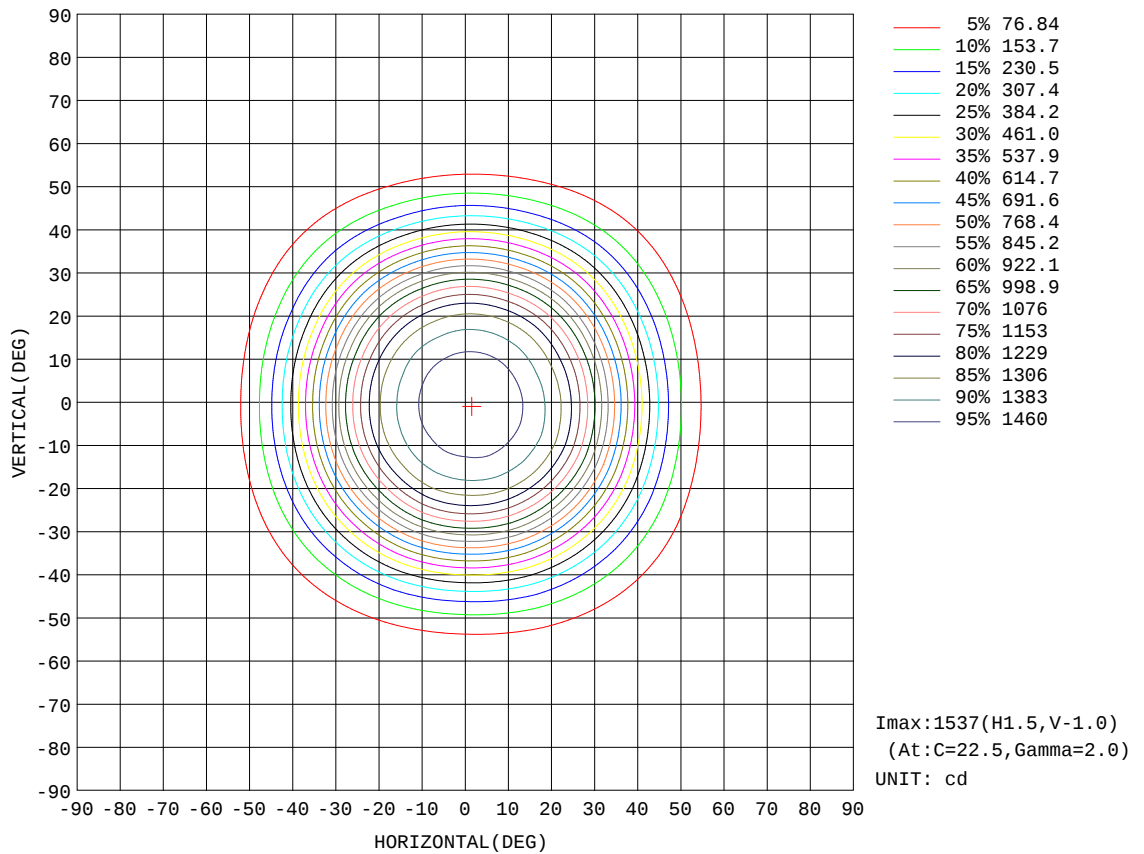
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	74	70	81	74	70	80	74	70	65
0.80	90	83	79	89	83	79	88	82	78	74
1.00	96	89	85	95	89	85	93	89	84	80
1.25	101	95	91	99	94	90	97	93	90	85
1.50	104	98	95	102	98	94	100	96	93	88
2.00	107	102	99	106	101	98	103	99	97	91
2.50	109	105	101	107	103	101	104	101	99	92
3.00	111	107	104	109	106	103	105	103	101	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	109	112	110	108	108	106	105	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:2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



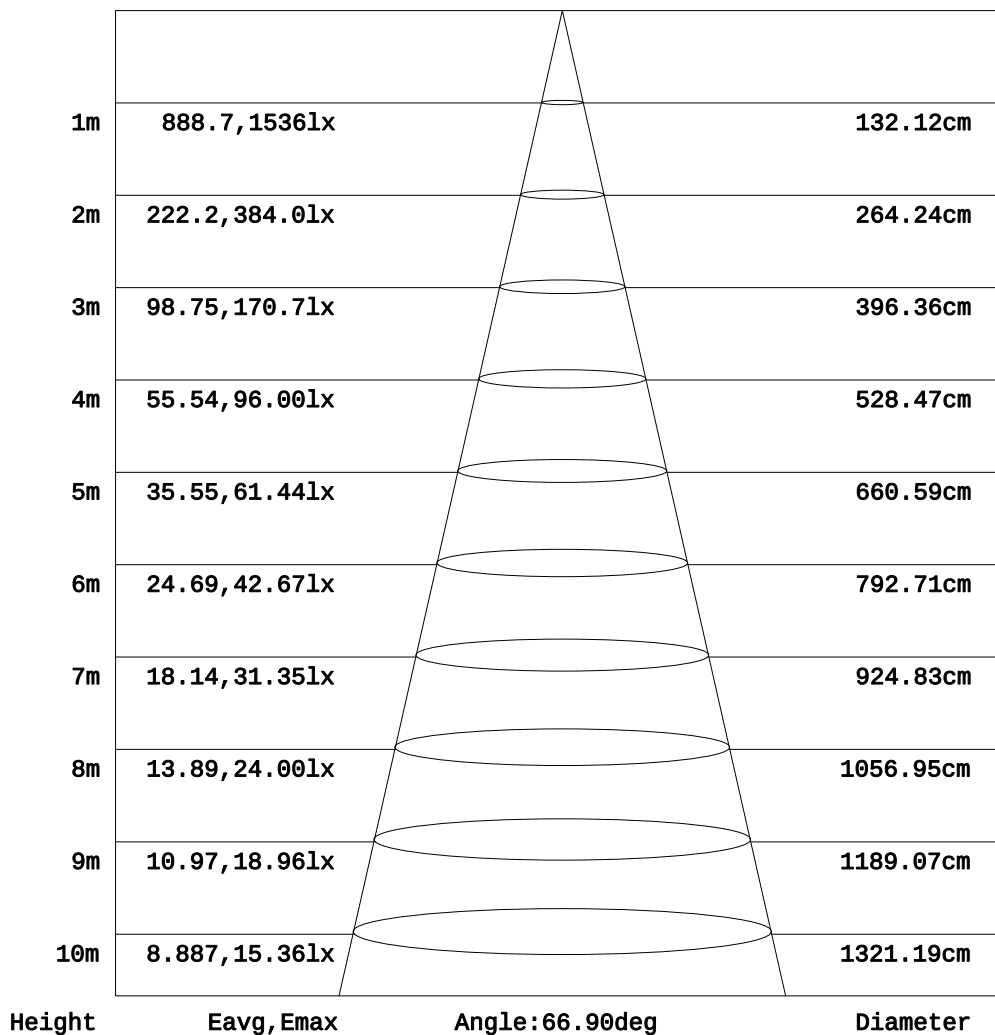
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

Flux out:1270 lm



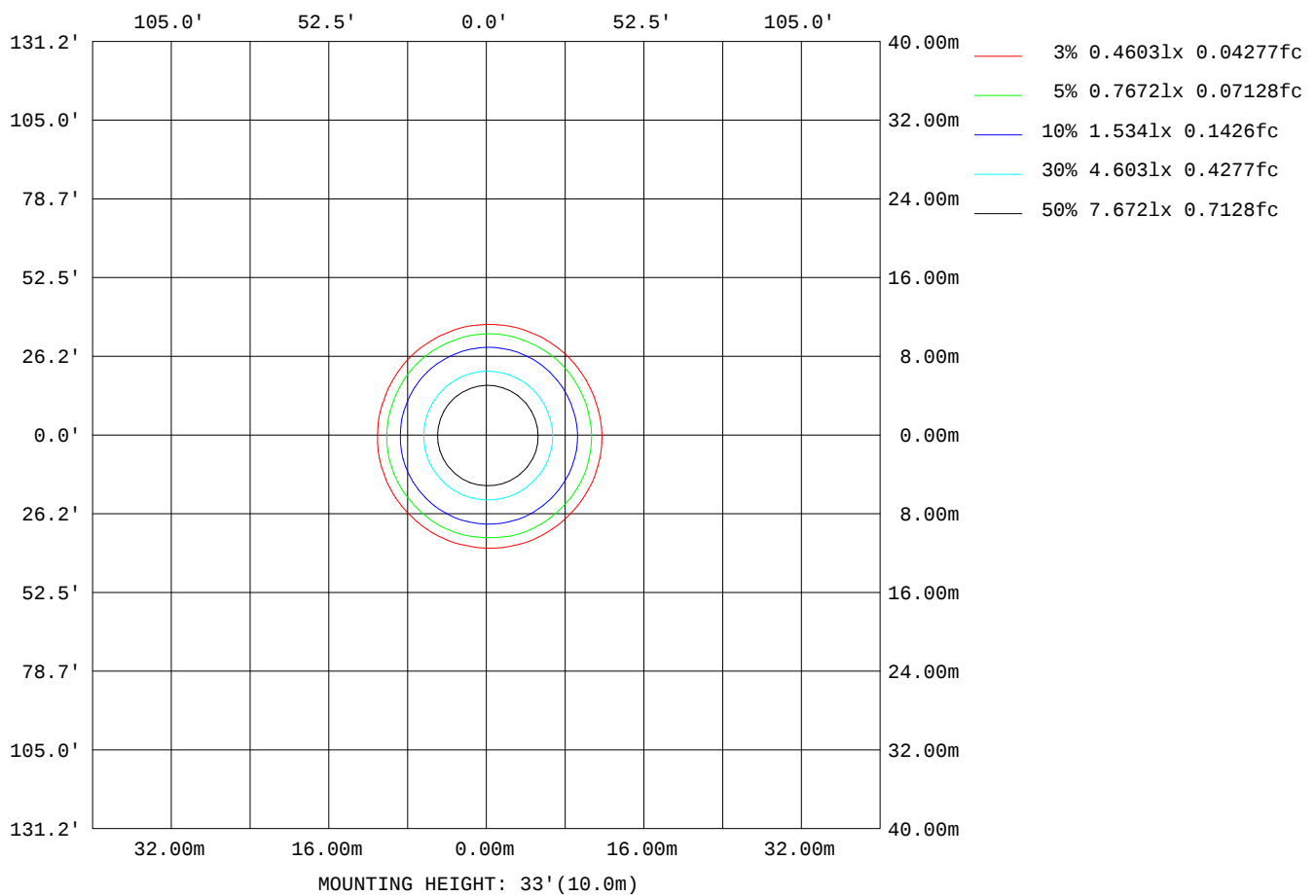
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black 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: 2024-05-23

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:230.60V I:0.0864A P:18.348W PF:0.9210 Freq:49.99Hz Lamp Flux:1780.13x1 lm		
NAME: BJ20-BKC20C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

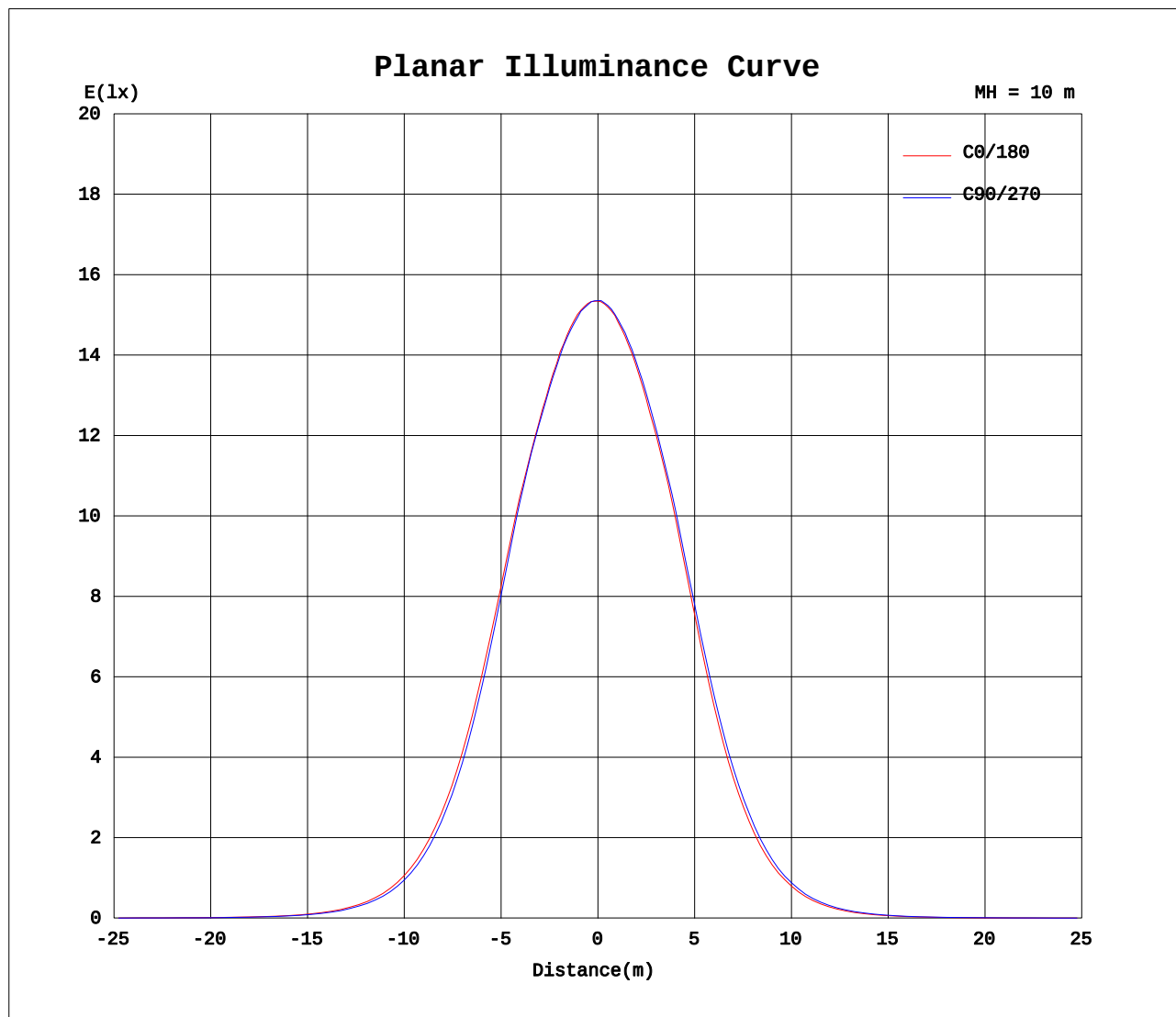
AvgL	cd/m2
L_0~180(65)av	6875
L_0~180(75)av	911
L_0~180(85)av	641
L_90~270(65)av	6587
L_90~270(75)av	944
L_90~270(85)av	661
L_45(65)av	6720
L_45(75)av	906
L_45(85)av	634

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-23

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: 2024-05-23

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:

```