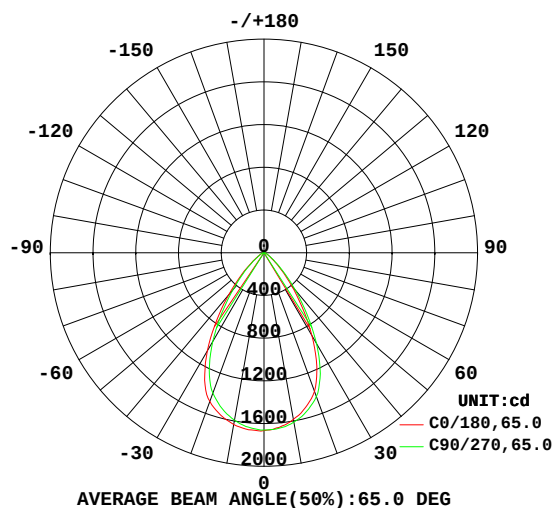


LUMINAIRE PHOTOMETRIC TEST REPORT

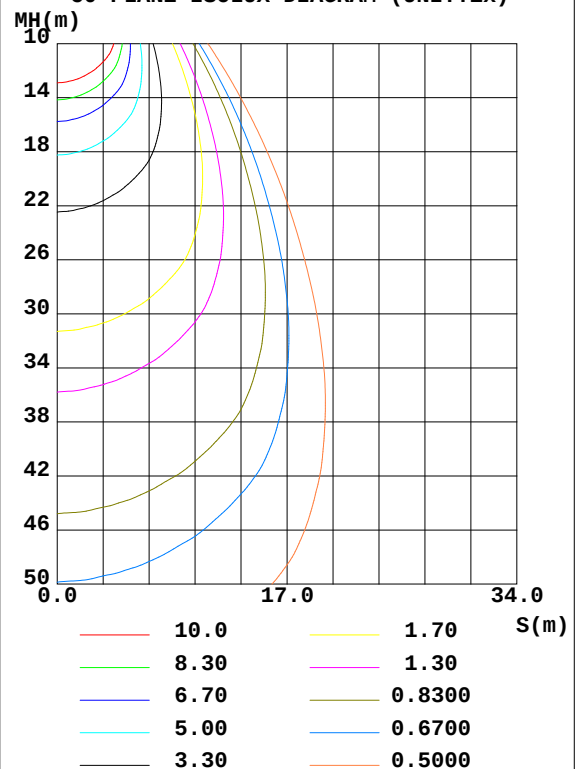
Test:U:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 104.75 lm/W			
MODEL	4000K	I _{max} (cd)	1669	S/MH(C0/180)	1.00
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.96
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1946.4	η UP, DN(C0-180)	0.0, 50.0
NOMINAL FLUX(lm)	1946.42	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.0
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: 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:

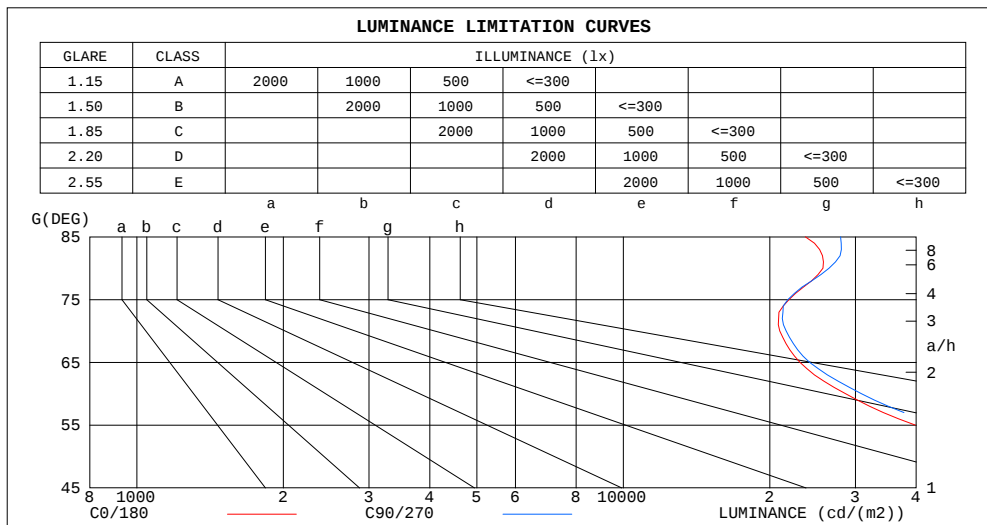
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1585	1592	1610	1623	1633	1614	1593	1577	0- 10	155.8	155.8	8,8
20	1383	1402	1433	1480	1482	1448	1399	1380	10- 20	429.7	585.5	30.1,30.1
30	900.5	927.3	986.8	1056	1061	1020	959.3	909.3	20- 30	560.5	1146	58.9,58.9
40	403.0	415.0	457.1	501.4	513.4	493.2	453.4	415.1	30- 40	435.6	1582	81.3,81.3
50	134.5	137.6	153.5	171.4	177.5	170.9	156.4	140.1	40- 50	218.1	1800	92.5,92.5
60	47.51	48.00	51.24	55.78	57.73	56.34	52.36	48.52	50- 60	81.90	1882	96.7,96.7
70	23.81	23.89	24.55	25.88	26.48	26.17	25.09	23.89	60- 70	35.56	1917	98.5,98.5
80	14.83	14.87	15.26	15.87	16.30	16.24	15.52	14.72	70- 80	20.65	1938	99.6,99.6
90	0.3899	0.3860	0.3745	0.6099	0.5289	0.2509	0.1313	0.1351	80- 90	8.667	1946	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
 γ 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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	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	23660	27966
80	25720	26473
75	21915	21795
70	20973	21620
65	23067	24133
60	28618	30868
55	39818	44559
50	63010	71935
45	102189	117045

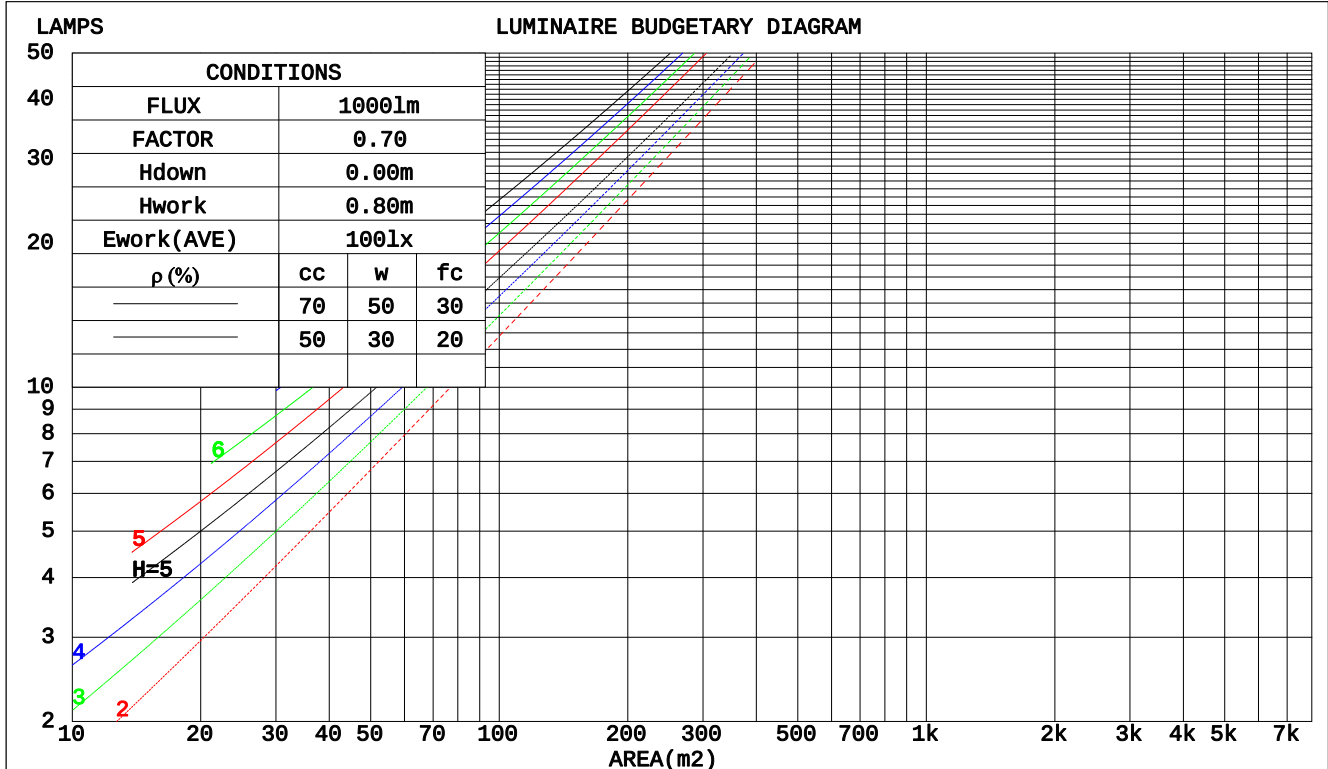
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-23

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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	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	1.09	1.07	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.98	.96	.96	.95	.93	.91
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.90	.87	.85	.83
3.0	.92	.87	.82	.91	.86	.82	.88	.84	.80	.86	.82	.79	.84	.80	.78	.76
4.0	.85	.79	.74	.84	.78	.74	.82	.77	.73	.80	.76	.72	.78	.74	.71	.70
5.0	.79	.73	.68	.78	.72	.67	.76	.71	.67	.74	.70	.66	.73	.69	.65	.64
6.0	.73	.67	.62	.73	.66	.62	.71	.65	.61	.70	.65	.61	.68	.64	.60	.59
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.57	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.53	.62	.56	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.53	.49	.59	.53	.49	.58	.53	.49	.57	.52	.49	.57	.52	.48	.47
10.0	.56	.50	.46	.56	.50	.46	.55	.49	.45	.54	.49	.45	.53	.49	.45	.44



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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm					
NAME: BJ20-WHTC20C02			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	.205	.116	.037	.198	.113	.036	.185	.106	.034	.174	.100	.032	.163	.094	.030	
2.0	.196	.107	.033	.190	.105	.032	.179	.100	.031	.169	.095	.030	.160	.091	.029	
3.0	.186	.099	.030	.181	.097	.029	.172	.093	.028	.163	.089	.027	.155	.086	.027	
4.0	.176	.092	.027	.172	.090	.027	.164	.087	.026	.156	.084	.025	.149	.081	.025	
5.0	.167	.085	.025	.164	.084	.024	.156	.081	.024	.150	.079	.024	.144	.077	.023	
6.0	.159	.080	.023	.156	.079	.023	.149	.077	.022	.143	.075	.022	.138	.073	.022	
7.0	.151	.075	.021	.148	.074	.021	.143	.072	.021	.137	.070	.020	.132	.069	.020	
8.0	.144	.070	.020	.141	.070	.020	.136	.068	.019	.132	.067	.019	.127	.065	.019	
9.0	.137	.066	.019	.135	.066	.018	.130	.064	.018	.126	.063	.018	.122	.062	.018	
10.0	.131	.063	.017	.129	.062	.017	.125	.061	.017	.121	.060	.017	.117	.059	.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	.049	.019	.017	.016	
2.0	.159	.132	.110	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.086	.127	.098	.075	.087	.068	.052	.050	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.119	.086	.060	.082	.060	.042	.047	.035	.025	.015	.011	.008	
5.0	.131	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.101	.062	.035	.070	.044	.025	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.096	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004	
9.0	.107	.061	.030	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.036	.020	.010	.012	.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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm											
NAME: BJ20-WHTC20C02					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	22.1	23.2	22.3	23.4	23.5	22.5	23.6	22.8	23.8	24.0
	3H	22.2	23.2	22.4	23.4	23.6	22.6	23.6	22.9	23.8	24.0
	4H	22.2	23.2	22.5	23.4	23.6	22.6	23.6	22.9	23.8	24.0
	6H	22.3	23.2	22.6	23.5	23.7	22.7	23.6	23.0	23.9	24.1
	8H	22.4	23.2	22.7	23.5	23.8	22.8	23.6	23.1	23.9	24.2
	12H	22.4	23.2	22.8	23.5	23.8	22.8	23.6	23.2	23.9	24.2
4H	2H	22.0	22.9	22.3	23.1	23.4	22.4	23.4	22.7	23.6	23.8
	3H	22.1	23.0	22.5	23.2	23.5	22.5	23.4	22.9	23.6	23.9
	4H	22.3	23.0	22.6	23.3	23.6	22.7	23.4	23.0	23.7	24.0
	6H	22.5	23.2	22.9	23.5	23.9	22.9	23.5	23.3	23.9	24.2
	8H	22.7	23.3	23.1	23.6	24.0	23.0	23.6	23.4	24.0	24.3
	12H	22.7	23.3	23.1	23.7	24.1	23.1	23.7	23.5	24.0	24.4
8H	4H	22.3	22.9	22.7	23.3	23.6	22.7	23.3	23.1	23.6	24.0
	6H	22.7	23.2	23.1	23.6	24.0	23.0	23.5	23.4	23.9	24.3
	8H	22.9	23.3	23.3	23.7	24.2	23.2	23.6	23.6	24.0	24.5
	12H	23.0	23.4	23.5	23.8	24.3	23.4	23.7	23.8	24.2	24.6
12H	4H	22.3	22.8	22.7	23.2	23.6	22.6	23.2	23.1	23.6	24.0
	6H	22.7	23.1	23.1	23.5	24.0	23.0	23.4	23.5	23.9	24.3
	8H	22.9	23.3	23.4	23.7	24.2	23.2	23.6	23.7	24.0	24.5
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 1.5 / - 2.3					+ 1.7 / - 2.5					
1.5H	+ 2.5 / - 2.2					+ 2.8 / - 2.4					
2.0H	+ 3.0 / - 1.6					+ 3.4 / - 1.8					

CIE Pub.117, 1946 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.3$)
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
 γ 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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

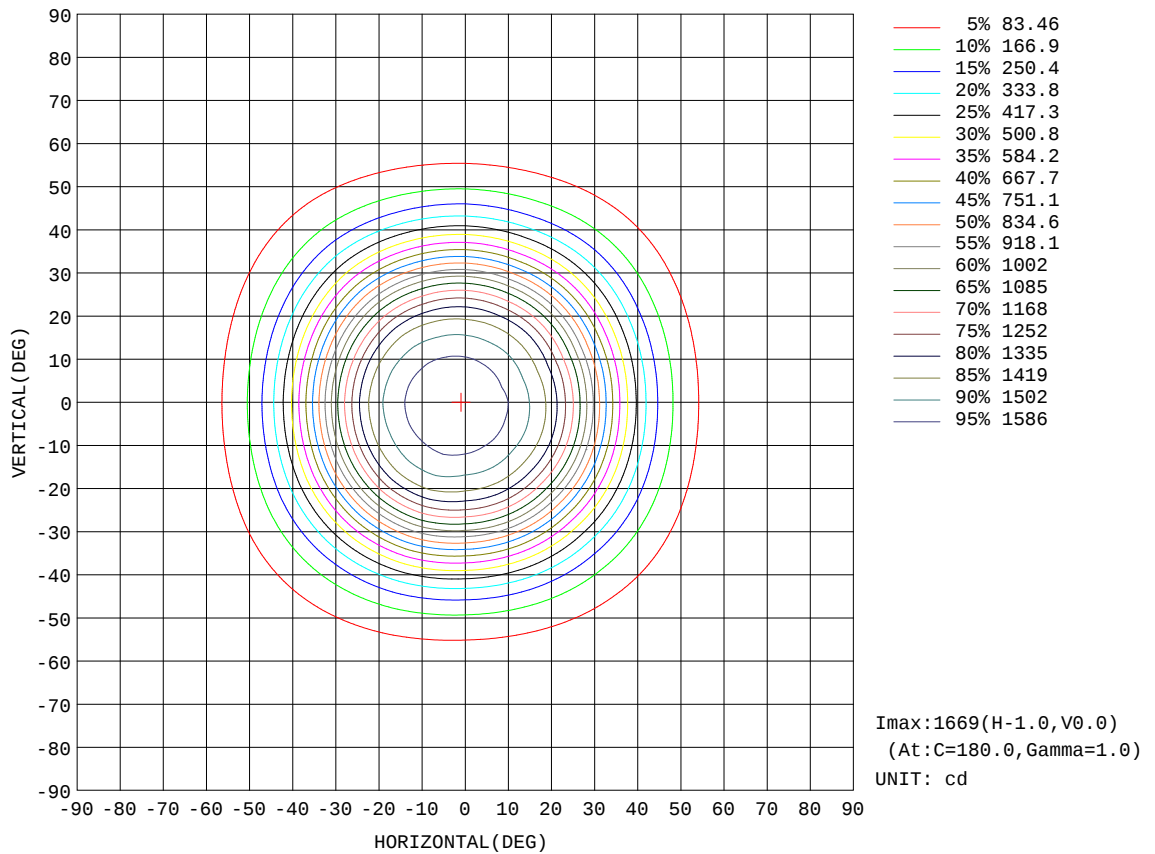
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	80	72	67	79	72	67	78	71	67	63
0.80	88	81	76	87	81	76	86	80	76	71
1.00	94	87	83	93	87	82	91	87	82	77
1.25	99	93	88	98	92	88	96	91	87	82
1.50	102	96	92	101	96	92	98	94	91	86
2.00	106	101	97	104	100	96	101	98	95	89
2.50	108	103	100	106	102	99	103	100	97	91
3.00	110	106	102	108	104	101	104	102	99	92
4.00	112	109	106	110	107	105	106	104	102	94
5.00	114	111	108	111	109	107	107	105	104	96
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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



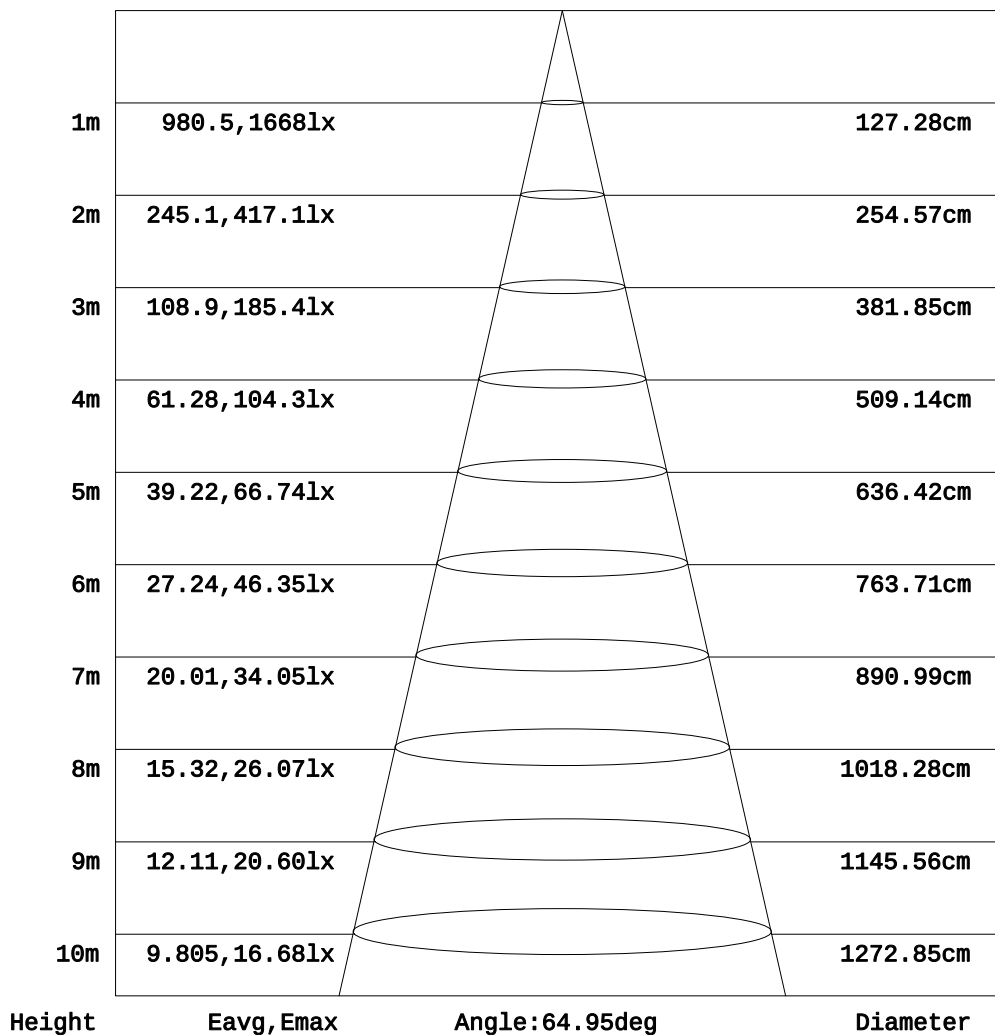
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-23

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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

Flux out:1299 lm



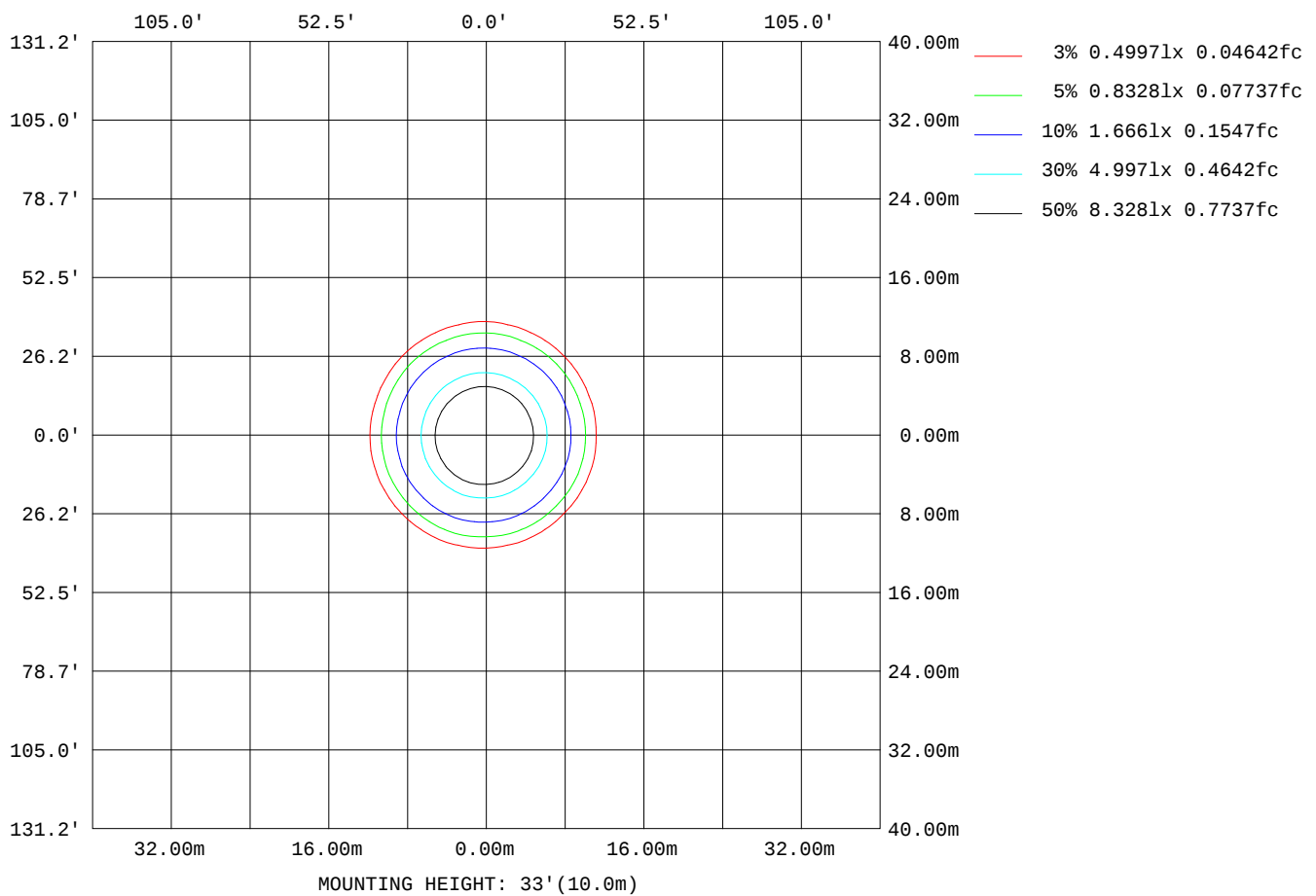
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	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: 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:230.59V I:0.0875A P:18.582W PF:0.9214 Freq:49.99Hz Lamp Flux:1946.42x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

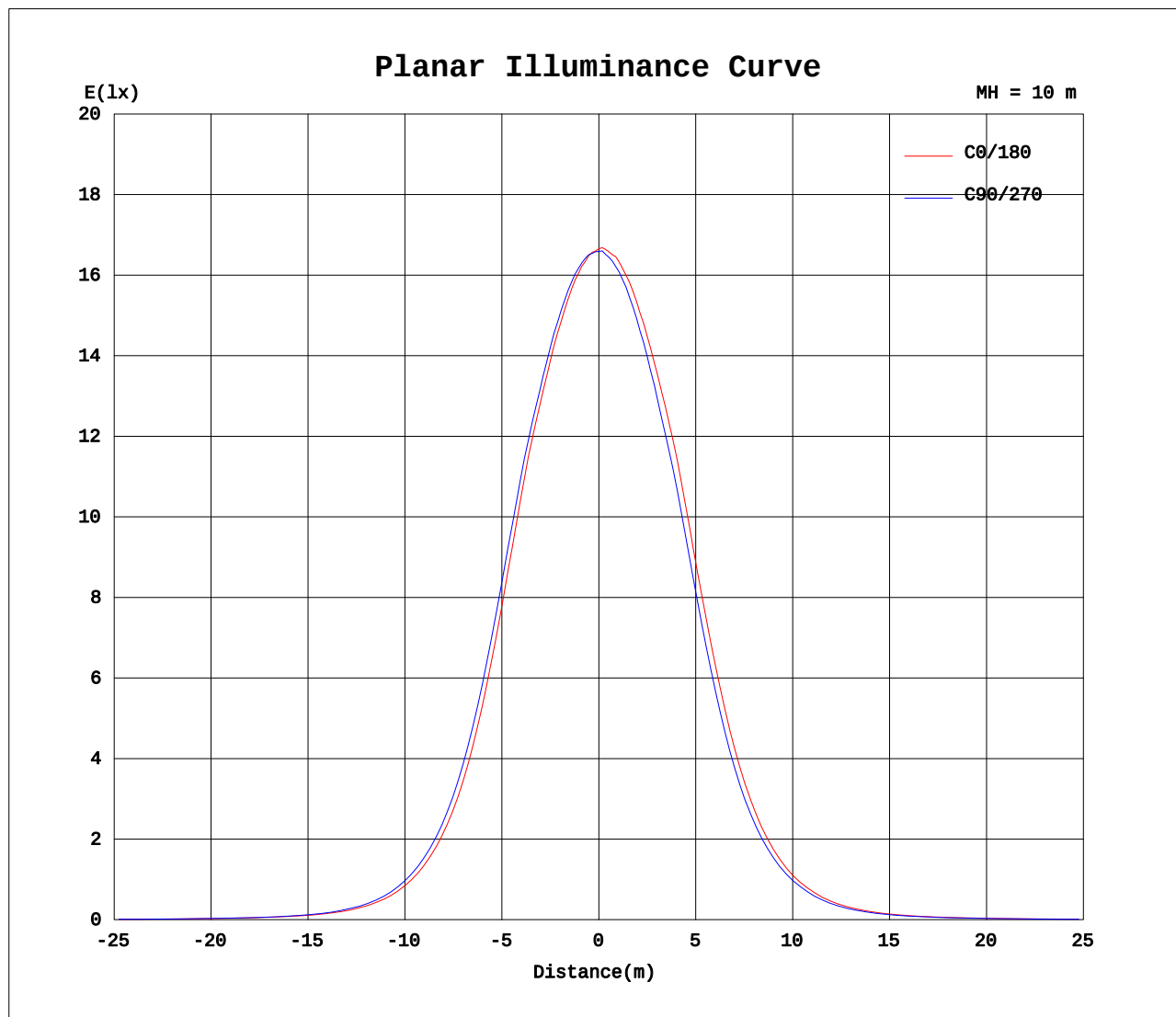
AvgL	cd/m2
L_0~180(65)av	24904
L_0~180(75)av	22465
L_0~180(85)av	28290
L_90~270(65)av	24467
L_90~270(75)av	22024
L_90~270(85)av	28000
L_45(65)av	24682
L_45(75)av	22225
L_45(85)av	28008

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:

```