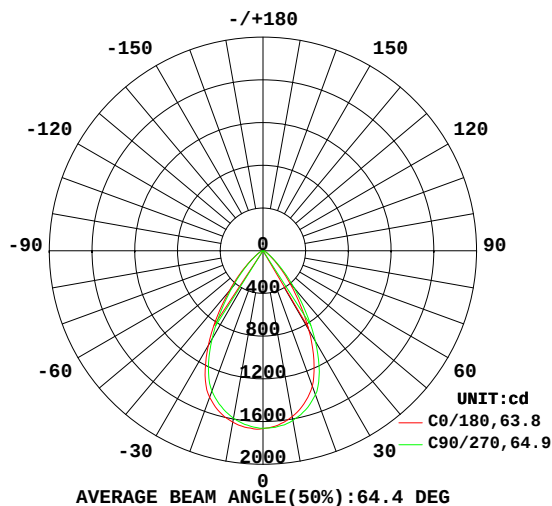


LUMINAIRE PHOTOMETRIC TEST REPORT

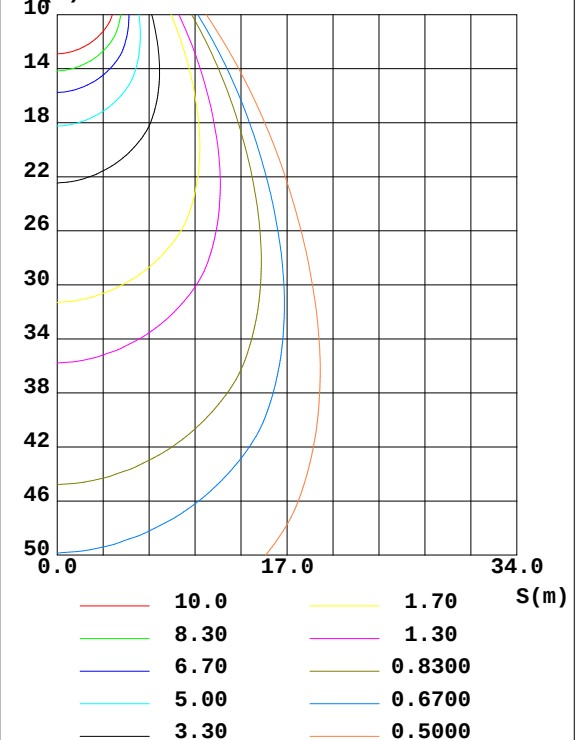
Test:U:230.59V I:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 99.23 lm/W			
MODEL	5700K	I _{max} (cd)	1672	S/MH(C0/180)	0.99
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.96
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1912.0	η UP, DN(C0-180)	0.0, 50.1
NOMINAL FLUX(lm)	1912	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.9
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:

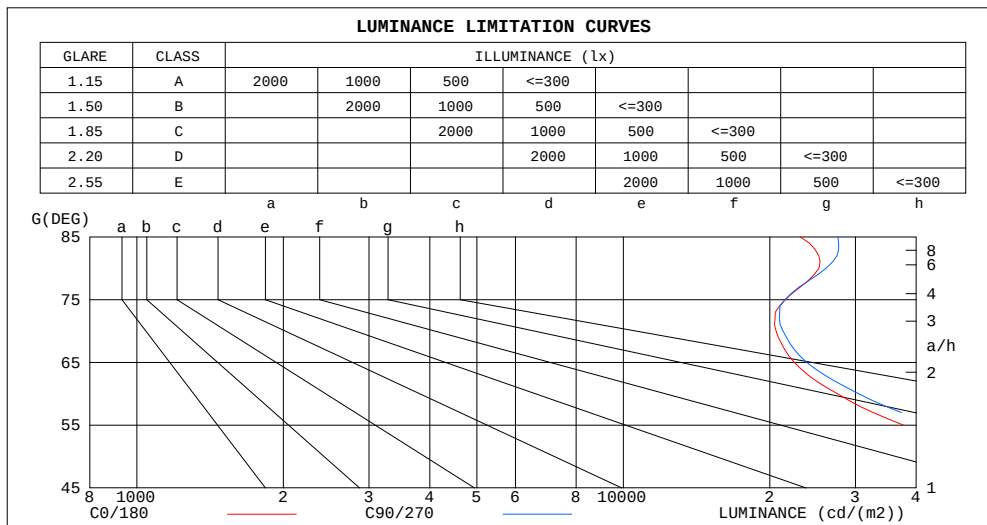
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1577	1581	1613	1634	1630	1611	1592	1579	0- 10	155.8	155.8	8.15, 8.15
20	1350	1341	1436	1496	1461	1409	1398	1383	10- 20	427.1	582.9	30.5, 30.5
30	862.0	862.2	984.0	1071	1027	960.3	955.6	909.1	20- 30	550.4	1133	59.3, 59.3
40	384.4	387.5	454.5	506.5	493.9	462.5	448.4	412.4	30- 40	424.1	1557	81.5, 81.5
50	126.6	127.2	152.3	173.7	169.6	159.3	153.7	139.0	40- 50	211.9	1769	92.5, 92.5
60	45.72	45.56	50.53	55.85	55.39	53.05	51.31	47.80	50- 60	79.13	1848	96.7, 96.7
70	23.39	23.40	24.16	25.58	25.97	25.59	24.65	23.47	60- 70	34.73	1883	98.5, 98.5
80	14.55	14.63	15.06	15.67	16.08	16.01	15.25	14.47	70- 80	20.32	1903	99.6, 99.6
90	0.3745	0.3629	0.3667	0.6678	0.6022	0.2934	0.1235	0.1351	80- 90	8.543	1912	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:230.59V I:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 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	23085	27605
80	25238	26117
75	21538	21498
70	20598	21280
65	22450	23818
60	27539	30440
55	37645	44033
50	59310	71344
45	97341	116046

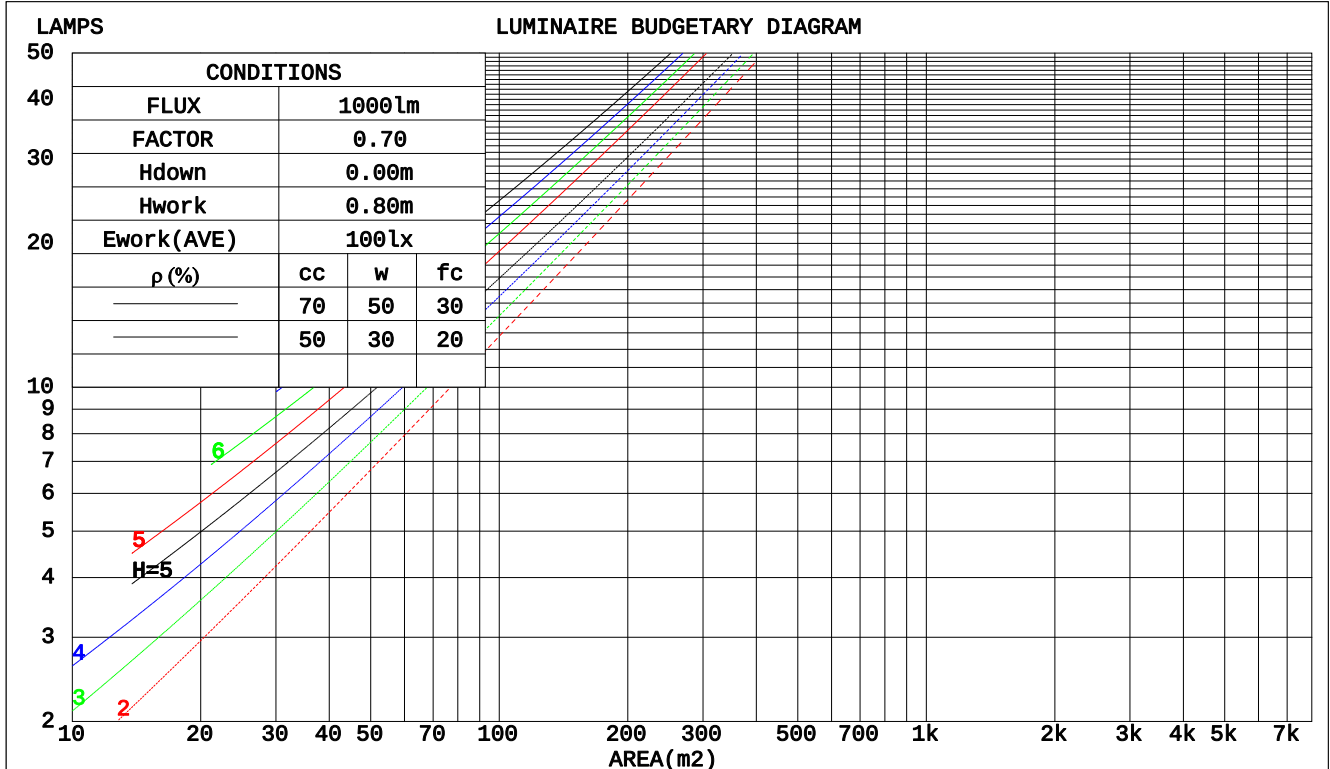
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-23

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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 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	.92
2.0	1.00	.96	.92	.99	.95	.91	.95	.92	.89	.92	.90	.87	.90	.87	.85	.83
3.0	.93	.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	.68	.76	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.67	.62	.71	.66	.61	.70	.65	.61	.68	.64	.61	.59
7.0	.69	.62	.57	.68	.62	.57	.67	.61	.57	.65	.60	.56	.64	.60	.56	.55
8.0	.64	.58	.53	.64	.57	.53	.62	.57	.53	.61	.56	.52	.60	.56	.52	.51
9.0	.60	.54	.49	.60	.53	.49	.59	.53	.49	.58	.52	.49	.57	.52	.49	.47
10.0	.56	.50	.46	.56	.50	.46	.55	.50	.46	.54	.49	.46	.54	.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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 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	.204	.116	.037	.198	.113	.036	.185	.106	.034	.173	.100	.032	.162	.094	.030		
2.0	.195	.107	.033	.190	.104	.032	.179	.099	.031	.169	.095	.030	.160	.090	.028		
3.0	.186	.099	.030	.181	.097	.029	.171	.093	.028	.163	.089	.027	.155	.086	.026		
4.0	.176	.091	.027	.172	.090	.027	.163	.087	.026	.156	.084	.025	.149	.081	.025		
5.0	.167	.085	.025	.163	.084	.024	.156	.081	.024	.149	.079	.023	.143	.076	.023		
6.0	.158	.079	.023	.155	.078	.023	.149	.076	.022	.143	.074	.022	.137	.072	.021		
7.0	.151	.074	.021	.148	.074	.021	.142	.072	.021	.137	.070	.020	.132	.069	.020		
8.0	.143	.070	.020	.141	.069	.020	.136	.068	.019	.131	.066	.019	.127	.065	.019		
9.0	.137	.066	.018	.134	.066	.018	.130	.064	.018	.126	.063	.018	.122	.062	.018		
10.0	.131	.063	.017	.129	.062	.017	.124	.061	.017	.121	.060	.017	.117	.059	.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	.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	.040	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.096	.057	.030	.066	.040	.021	.039	.024	.013	.013	.008	.004	
9.0	.106	.061	.030	.092	.053	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.102	.056	.026	.088	.049	.023	.061	.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:230.59V I:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 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	21.8	22.9	22.0	23.0	23.2	22.4	23.5	22.7	23.7	23.9
3H	21.9	22.9	22.1	23.1	23.3	22.5	23.5	22.7	23.7	23.9
4H	21.9	22.9	22.2	23.1	23.3	22.5	23.5	22.8	23.7	23.9
6H	22.1	23.0	22.4	23.2	23.5	22.6	23.5	22.9	23.8	24.0
8H	22.1	23.0	22.5	23.2	23.5	22.7	23.5	23.0	23.8	24.1
12H	22.2	23.0	22.5	23.3	23.5	22.7	23.6	23.1	23.8	24.1
4H 2H	21.7	22.6	22.0	22.8	23.1	22.3	23.2	22.6	23.5	23.7
3H	21.9	22.7	22.2	22.9	23.2	22.4	23.2	22.8	23.5	23.8
4H	22.0	22.8	22.4	23.1	23.4	22.6	23.3	22.9	23.6	23.9
6H	22.3	22.9	22.7	23.3	23.6	22.8	23.4	23.2	23.8	24.1
8H	22.4	23.0	22.8	23.4	23.8	22.9	23.5	23.3	23.9	24.2
12H	22.5	23.1	22.9	23.4	23.8	23.0	23.6	23.4	23.9	24.3
8H 4H	22.1	22.7	22.4	23.0	23.4	22.6	23.2	23.0	23.5	23.9
6H	22.4	22.9	22.9	23.3	23.8	22.9	23.4	23.3	23.8	24.2
8H	22.7	23.1	23.1	23.5	23.9	23.1	23.5	23.6	24.0	24.4
12H	22.8	23.2	23.3	23.6	24.1	23.3	23.7	23.8	24.1	24.6
12H 4H	22.0	22.6	22.5	23.0	23.4	22.5	23.1	23.0	23.5	23.9
6H	22.5	22.9	22.9	23.3	23.8	22.9	23.4	23.4	23.8	24.2
8H	22.7	23.1	23.2	23.5	24.0	23.2	23.5	23.6	24.0	24.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.5 / - 2.2					+ 1.8 / - 2.4				
1.5H	+ 2.6 / - 2.1					+ 3.0 / - 2.5				
2.0H	+ 3.0 / - 1.5					+ 3.5 / - 1.8				

CIE Pub.117, 1912 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 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
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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

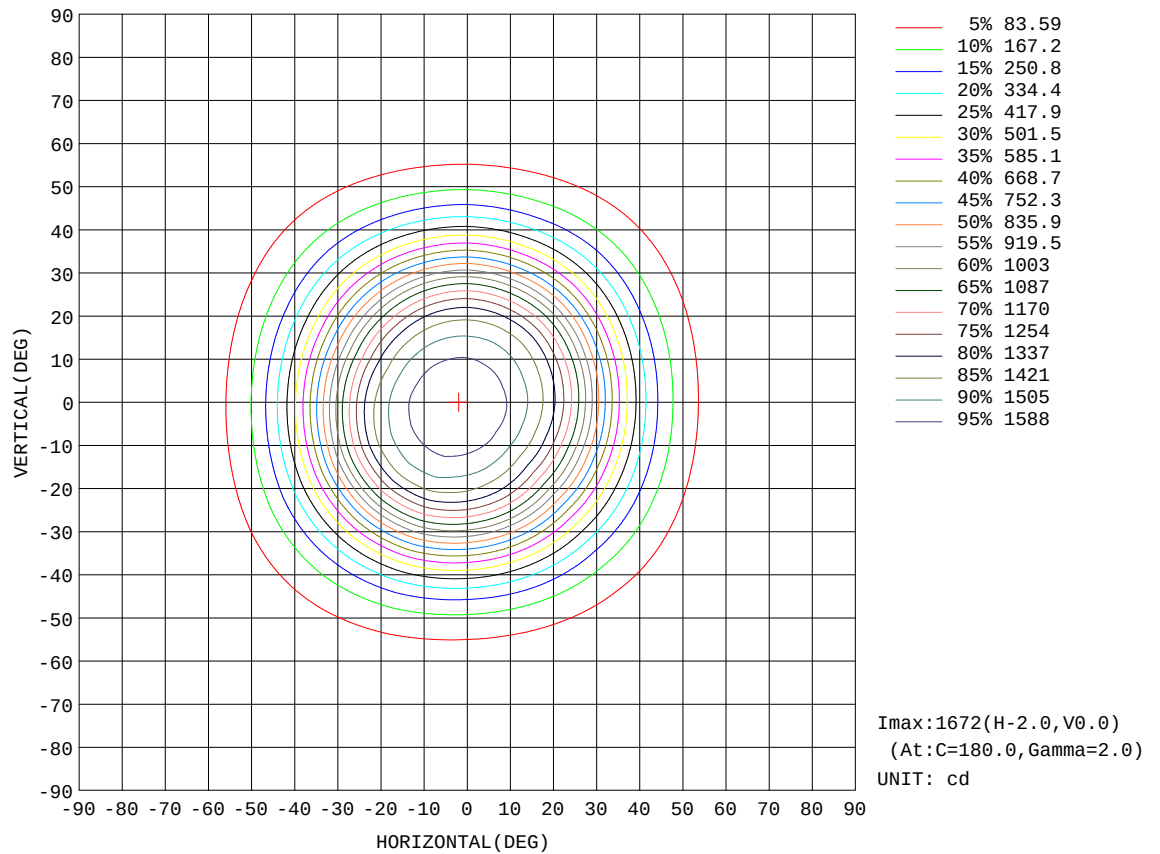
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	80	72	68	79	72	67	78	72	67	63
0.80	88	81	76	88	81	76	86	80	76	71
1.00	94	87	83	93	87	83	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	95
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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

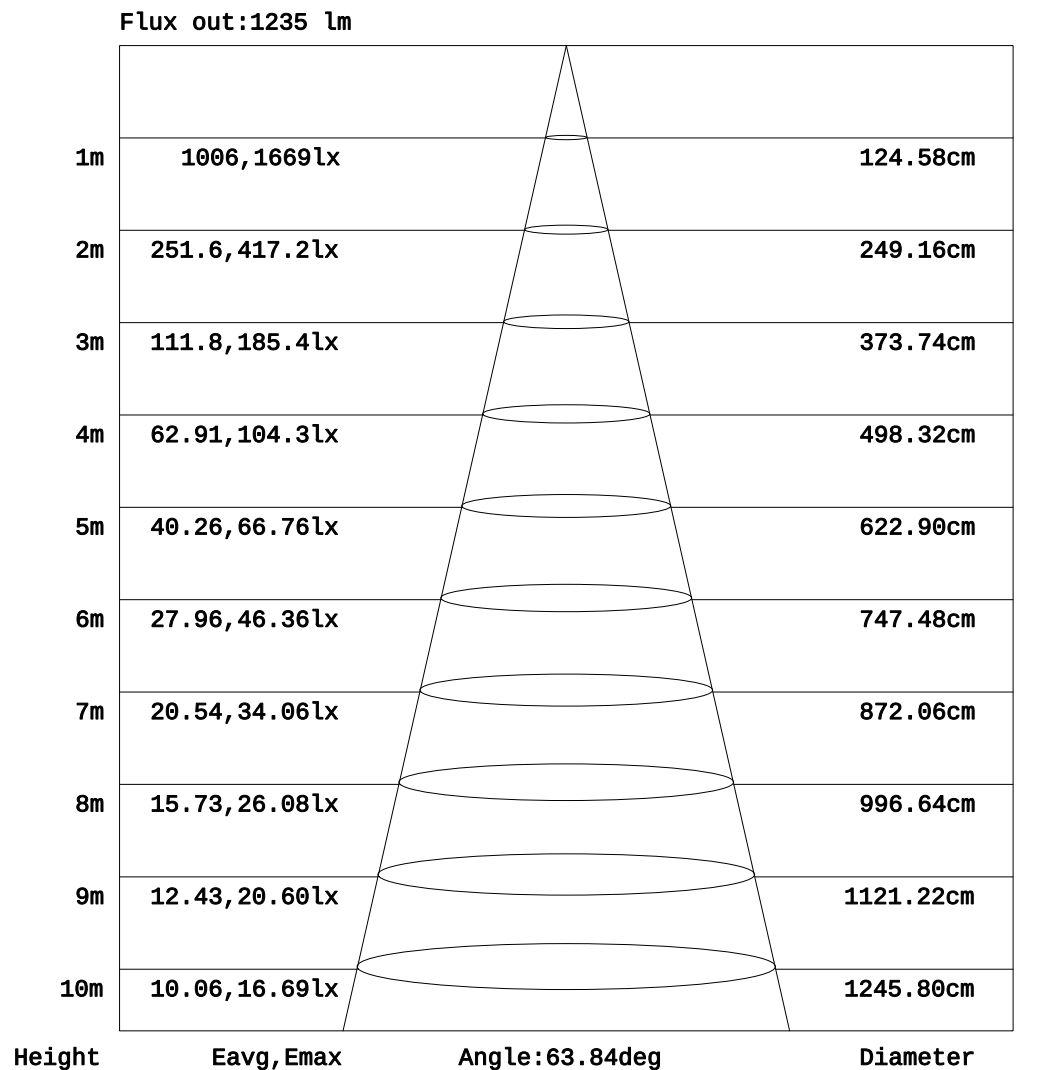


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-23

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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:



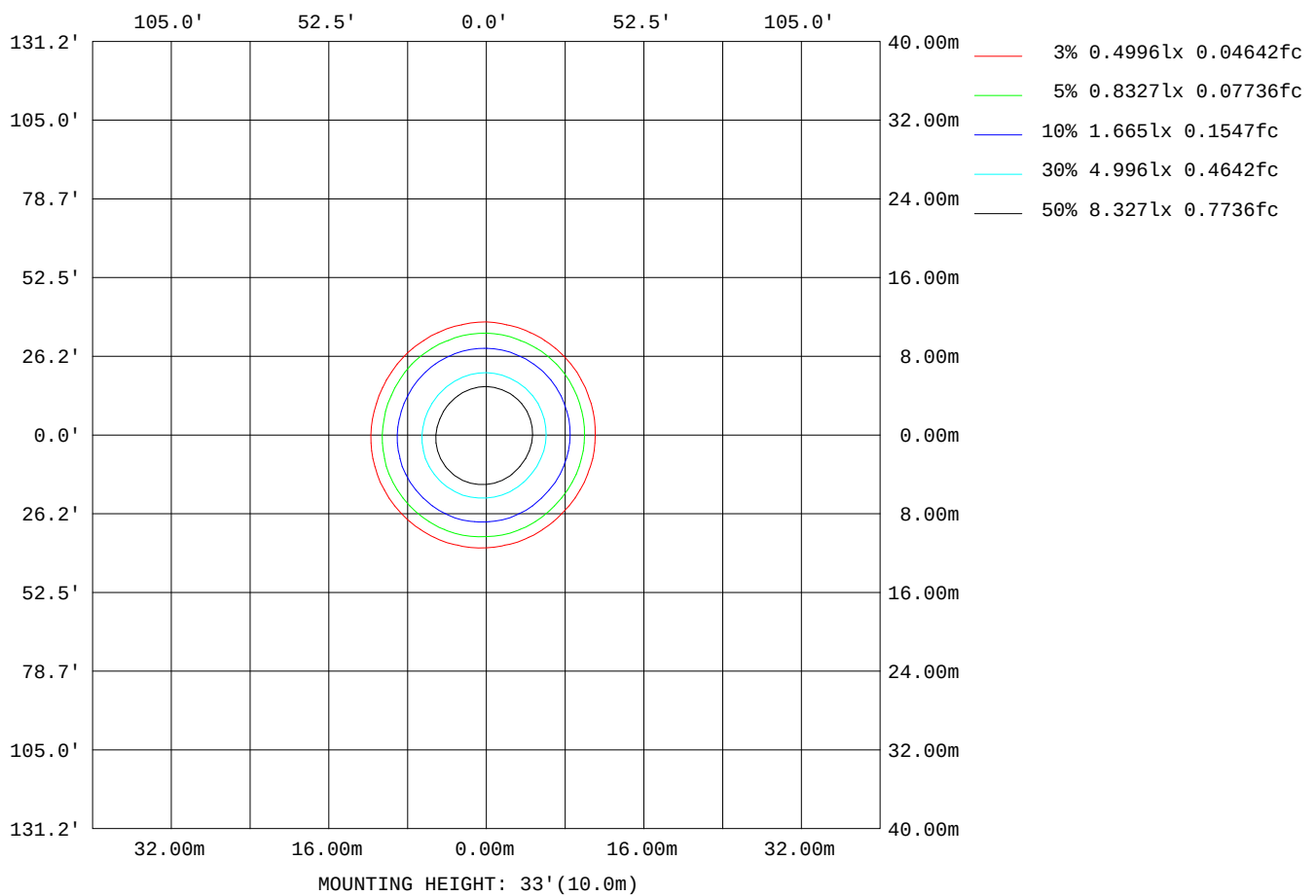
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 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:0.0901A P:19.268W PF:0.9272 Freq:49.99Hz Lamp Flux:1912x1 lm		
NAME: BJ20-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 65mm	Shielding Angle:

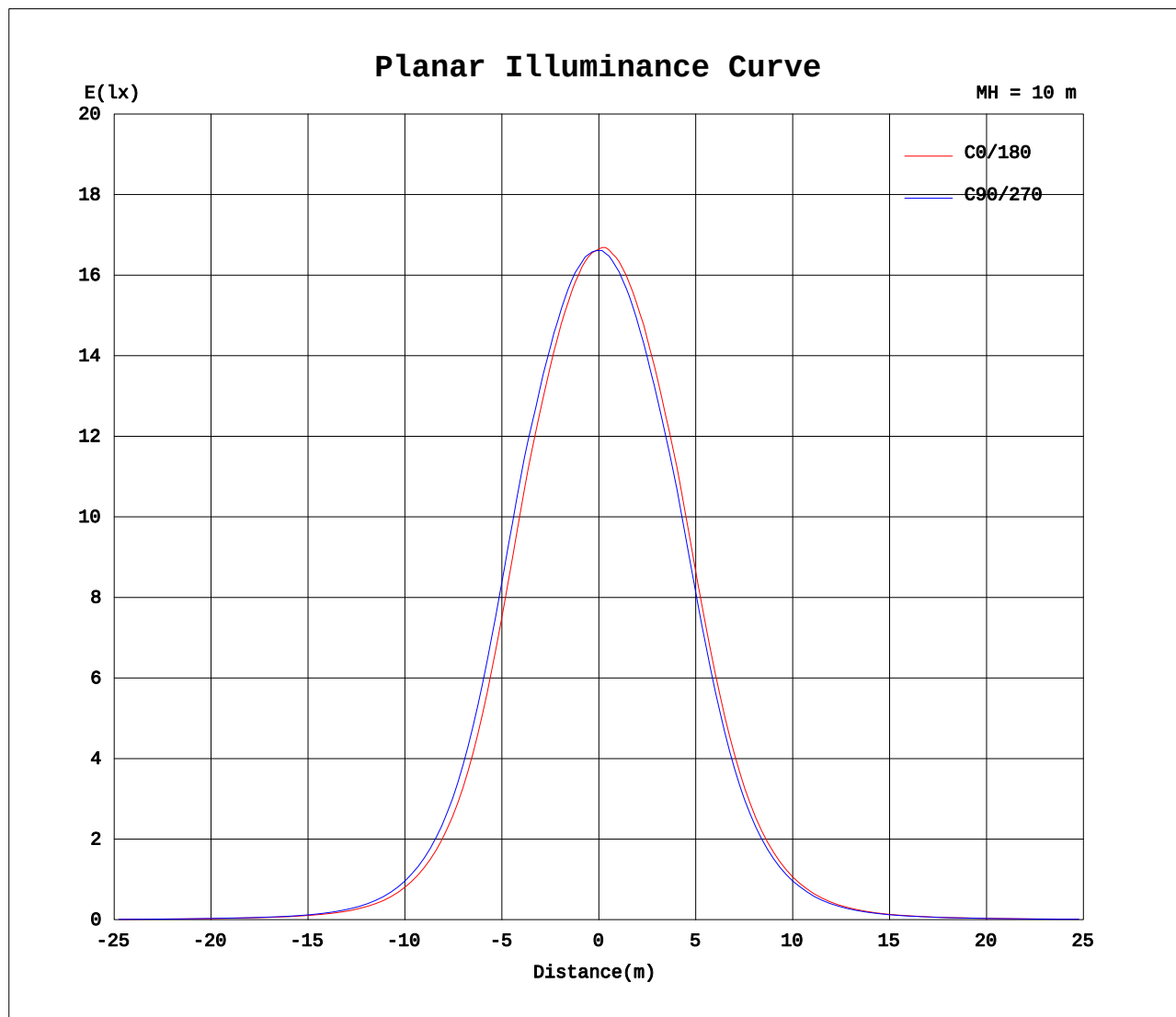
AvgL	cd/m2
L_0~180(65)av	24234
L_0~180(75)av	22099
L_0~180(85)av	27850
L_90~270(65)av	24079
L_90~270(75)av	21691
L_90~270(85)av	27587
L_45(65)av	24126
L_45(75)av	21875
L_45(85)av	27621

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:

```