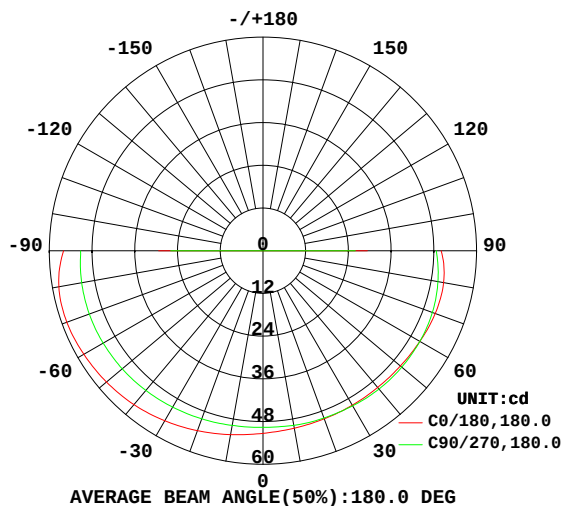


LUMINAIRE PHOTOMETRIC TEST REPORT

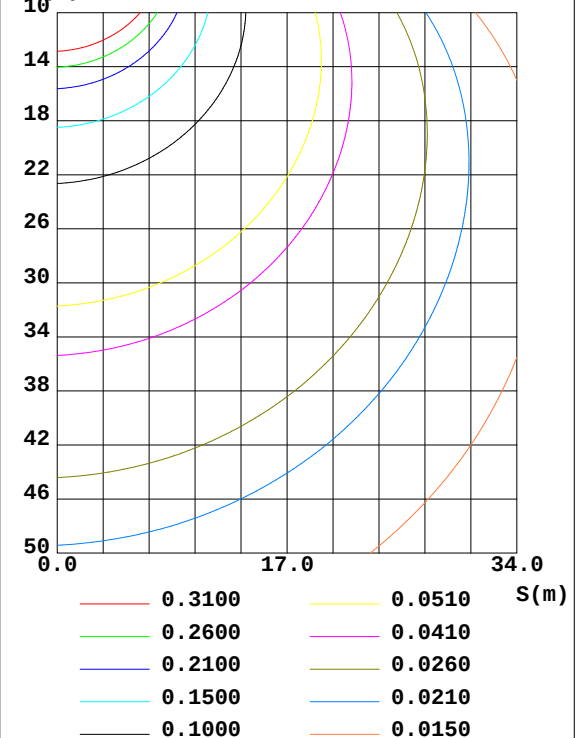
Test:U:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 24.64 lm/W
MODEL	3000K	I _{max} (cd)	58.65	S/MH(C0/180)	1.67	
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	1.58	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	324.60	η UP, DN(C0-180)	0.0, 49.3	
NOMINAL FLUX(lm)	324.597	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.7	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.75	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.75	

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: 2024-04-27

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:

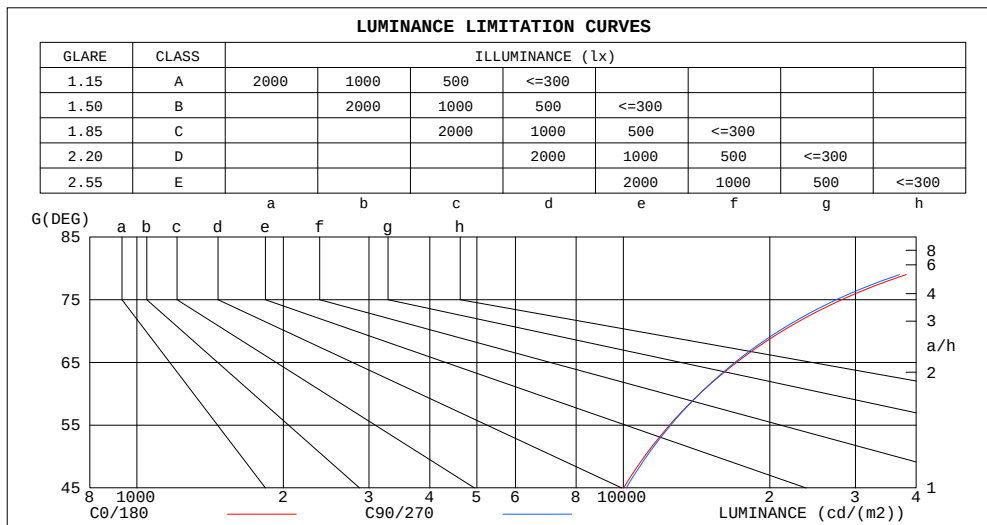
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	50.63	50.06	49.79	49.67	52.46	51.19	49.82	48.50	0- 10	4.768	4.768	1.47,1.47
20	50.25	49.78	50.02	50.72	53.79	52.19	50.26	48.49	10- 20	14.26	19.02	5.86,5.86
30	50.11	49.64	50.33	51.78	55.15	53.29	50.73	48.56	20- 30	23.49	42.51	13.1,13.1
40	50.12	49.57	50.70	52.59	56.42	54.31	51.21	48.71	30- 40	32.21	74.72	23,23
50	50.38	49.56	50.89	53.22	57.39	54.94	51.62	48.98	40- 50	40.06	114.8	35.4,35.4
60	50.89	49.63	50.89	53.61	58.12	55.29	51.85	49.36	50- 60	46.72	161.5	49.8,49.8
70	51.49	49.54	50.64	53.59	58.65	55.29	51.93	49.56	60- 70	51.90	213.4	65.7,65.7
80	51.50	48.90	49.91	52.85	58.23	54.89	51.71	49.38	70- 80	55.15	268.5	82.7,82.7
90	50.03	47.85	48.68	51.56	56.01	54.04	51.27	48.86	80- 90	56.05	324.6	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:2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:



LUMINANCE cd/(m ²)		
G(DEG)	C0/180	C90/270
85	82566	79855
80	41832	40537
75	28131	27429
70	21235	20884
65	17096	16963
60	14357	14355
55	12447	12513
50	11055	11166
45	10016	10137

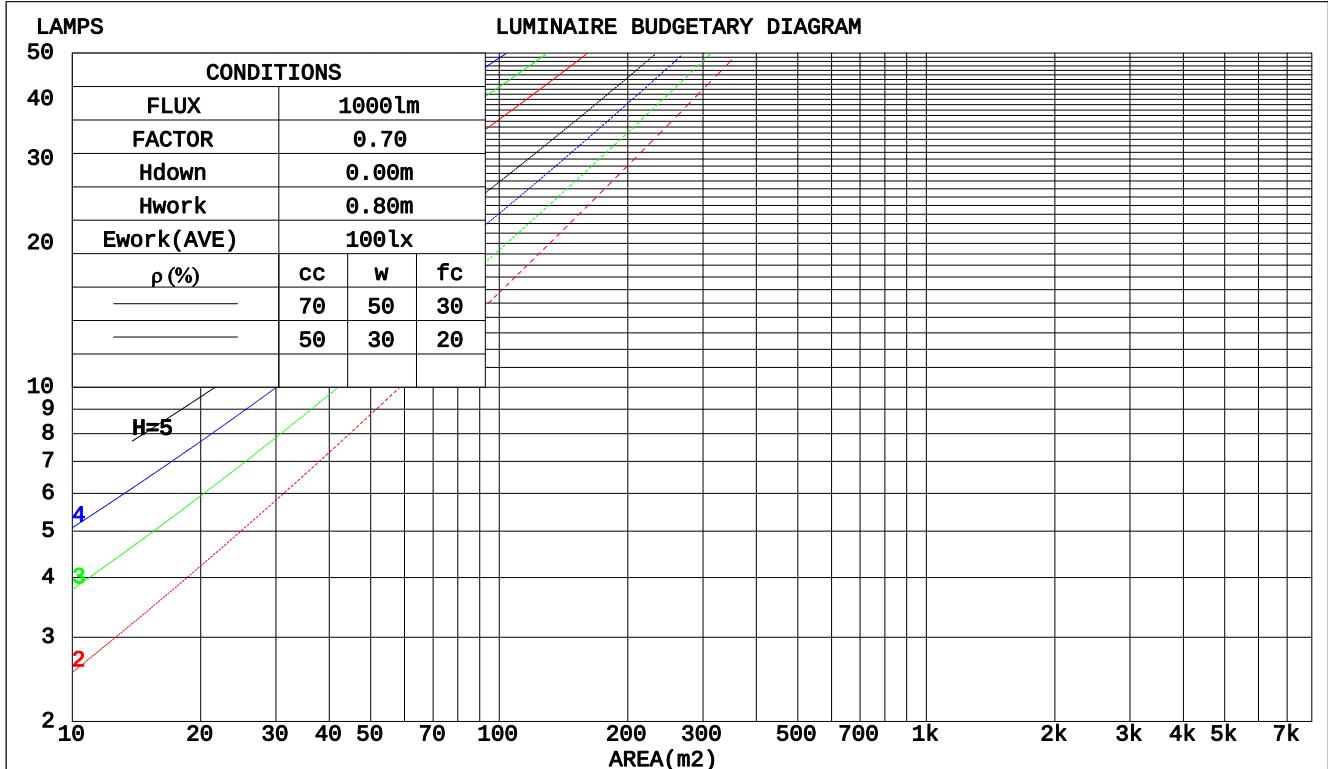
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	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	.92	.85	.78	.90	.83	.77	.85	.79	.74	.81	.76	.72	.77	.73	.69	.67
2.0	.76	.66	.58	.74	.65	.57	.70	.62	.55	.67	.60	.54	.63	.58	.53	.50
3.0	.65	.53	.45	.63	.52	.44	.60	.51	.43	.56	.49	.42	.54	.47	.41	.39
4.0	.56	.45	.36	.54	.44	.36	.52	.42	.35	.49	.41	.34	.47	.40	.34	.31
5.0	.49	.38	.30	.48	.37	.30	.45	.36	.29	.43	.35	.29	.41	.34	.28	.26
6.0	.44	.33	.25	.43	.32	.25	.41	.32	.25	.39	.31	.24	.37	.30	.24	.22
7.0	.39	.29	.22	.38	.29	.22	.37	.28	.21	.35	.27	.21	.34	.26	.21	.19
8.0	.36	.26	.19	.35	.25	.19	.33	.25	.19	.32	.24	.19	.31	.24	.18	.16
9.0	.32	.23	.17	.32	.23	.17	.31	.22	.17	.29	.22	.16	.28	.21	.16	.14
10.0	.30	.21	.15	.29	.21	.15	.28	.20	.15	.27	.20	.15	.26	.19	.15	.13



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm					
NAME: FGB16-BK6W24V			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+6000K			DIM.:		SERIAL No.:
MFR.:			SUR.: 95mm		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	.533	.303	.096	.525	.300	.095	.511	.293	.094	.498	.287	.092	.486	.281	.091	
2.0	.429	.235	.072	.422	.232	.072	.409	.227	.071	.397	.223	.070	.386	.218	.069	
3.0	.365	.194	.058	.358	.192	.058	.347	.188	.057	.336	.184	.057	.326	.181	.056	
4.0	.318	.165	.049	.313	.164	.048	.303	.161	.048	.293	.158	.048	.285	.155	.047	
5.0	.283	.144	.042	.278	.143	.042	.269	.140	.041	.261	.138	.041	.253	.135	.041	
6.0	.255	.128	.037	.251	.127	.036	.243	.124	.036	.235	.122	.036	.228	.120	.036	
7.0	.232	.115	.033	.228	.114	.032	.221	.112	.032	.214	.110	.032	.208	.108	.032	
8.0	.213	.104	.029	.209	.103	.029	.203	.101	.029	.197	.100	.029	.192	.098	.029	
9.0	.197	.095	.027	.194	.094	.026	.188	.093	.026	.183	.092	.026	.178	.090	.026	
10.0	.183	.088	.024	.180	.087	.024	.175	.086	.024	.170	.084	.024	.166	.083	.024	

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	.196	.154	.117	.167	.132	.100	.115	.091	.069	.066	.053	.040	.021	.017	.013		
2.0	.191	.131	.081	.163	.113	.070	.112	.078	.049	.064	.045	.029	.021	.015	.009		
3.0	.183	.115	.061	.157	.099	.053	.108	.069	.037	.062	.040	.022	.020	.013	.007		
4.0	.174	.103	.048	.149	.089	.042	.103	.062	.029	.059	.036	.017	.019	.012	.006		
5.0	.165	.093	.039	.142	.080	.034	.098	.056	.024	.057	.033	.014	.018	.011	.005		
6.0	.156	.085	.033	.134	.073	.029	.093	.051	.020	.054	.030	.012	.017	.010	.004		
7.0	.148	.078	.029	.127	.067	.025	.088	.047	.018	.051	.028	.011	.017	.009	.003		
8.0	.140	.072	.025	.121	.062	.022	.083	.044	.016	.049	.026	.009	.016	.008	.003		
9.0	.133	.067	.023	.114	.058	.020	.079	.041	.014	.046	.024	.008	.015	.008	.003		
10.0	.126	.063	.020	.109	.054	.018	.075	.038	.013	.044	.023	.008	.014	.007	.002		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm											
NAME: FGB16-BK6W24V						TYPE:			WEIGHT:		
SPEC.: black RA90 3000K+6000K						DIM.:			SERIAL No.:		
MFR.:						SUR.: 95mm			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	25.4	27.2	25.6	27.5	27.7	25.4	27.2	25.7	27.5	27.7	
	3H	28.7	30.4	29.0	30.7	30.9	28.6	30.4	28.9	30.6	30.9
	4H	30.5	32.2	30.9	32.5	32.8	30.4	32.1	30.8	32.4	32.7
	6H	32.6	34.2	33.0	34.5	34.9	32.5	34.1	32.8	34.4	34.7
	8H	33.8	35.4	34.1	35.7	36.0	33.6	35.2	34.0	35.5	35.8
	12H	35.1	36.6	35.5	37.0	37.3	34.9	36.5	35.3	36.8	37.1
4H	2H	26.4	28.1	26.8	28.4	28.7	26.4	28.1	26.8	28.4	28.7
	3H	29.9	31.4	30.2	31.7	32.1	29.8	31.4	30.2	31.7	32.0
	4H	31.9	33.3	32.3	33.7	34.0	31.8	33.3	32.2	33.6	34.0
	6H	34.1	35.5	34.6	35.8	36.2	34.0	35.4	34.4	35.7	36.1
	8H	35.4	36.7	35.8	37.1	37.5	35.3	36.5	35.7	36.9	37.3
	12H	36.8	38.0	37.3	38.4	38.9	36.7	37.9	37.1	38.3	38.7
8H	4H	32.7	33.9	33.1	34.3	34.7	32.6	33.9	33.0	34.3	34.7
	6H	35.2	36.3	35.7	36.7	37.2	35.1	36.2	35.6	36.6	37.1
	8H	36.6	37.7	37.1	38.1	38.6	36.5	37.5	37.0	38.0	38.4
	12H	38.3	39.2	38.8	39.7	40.2	38.2	39.1	38.7	39.5	40.0
12H	4H	32.9	34.1	33.3	34.5	34.9	32.8	34.0	33.3	34.4	34.9
	6H	35.5	36.5	36.0	37.0	37.4	35.5	36.5	35.9	36.9	37.4
	8H	37.1	38.0	37.6	38.5	39.0	37.0	37.9	37.5	38.4	38.8
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					

CIE Pub.117, 324.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.9)
Area: 0.00709 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

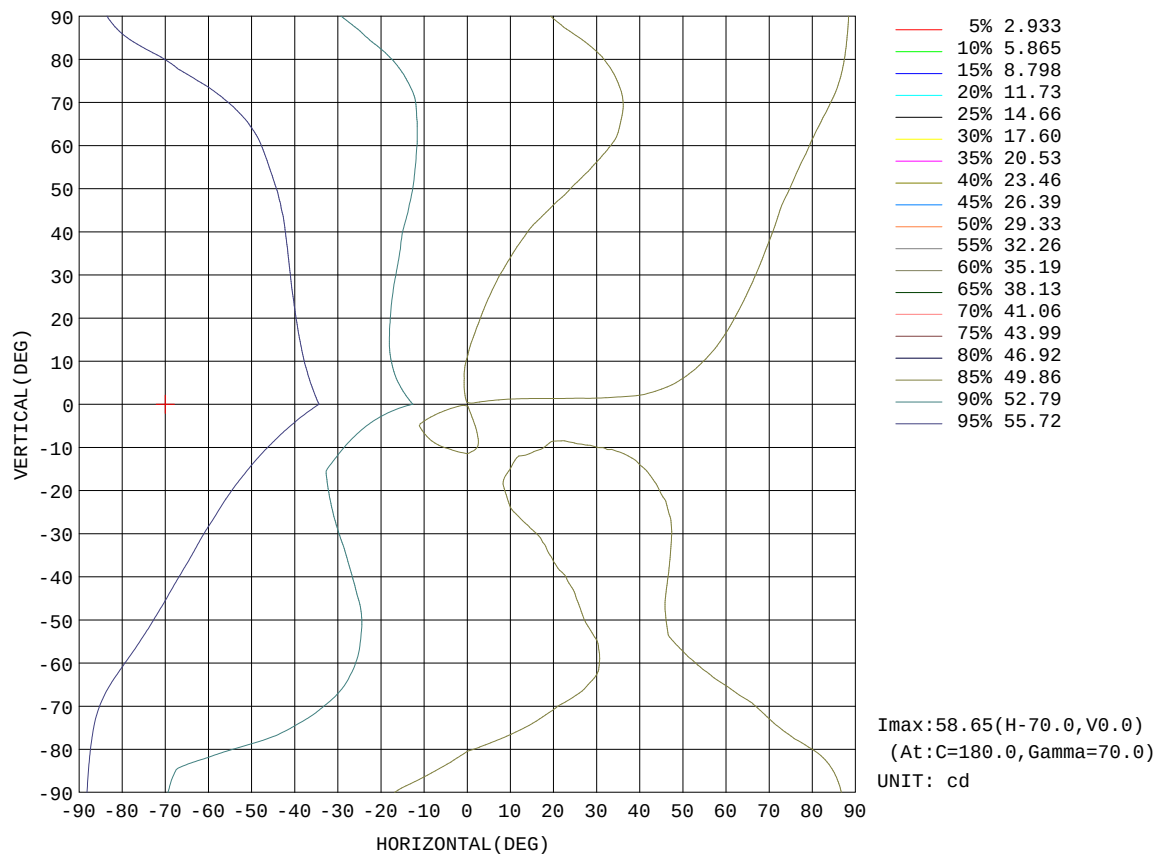
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	46	33	24	45	32	24	44	32	24	16
0.80	55	40	31	54	40	31	52	39	31	22
1.00	62	48	38	61	47	38	58	49	37	28
1.25	69	55	45	67	54	45	64	52	44	34
1.50	74	60	51	72	59	50	69	57	49	39
2.00	82	69	60	80	68	59	75	65	57	47
2.50	87	75	66	84	73	65	80	70	63	52
3.00	91	80	71	88	78	70	84	75	68	57
4.00	96	87	79	94	85	78	88	81	75	64
5.00	100	91	84	97	89	83	92	85	80	68
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:2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

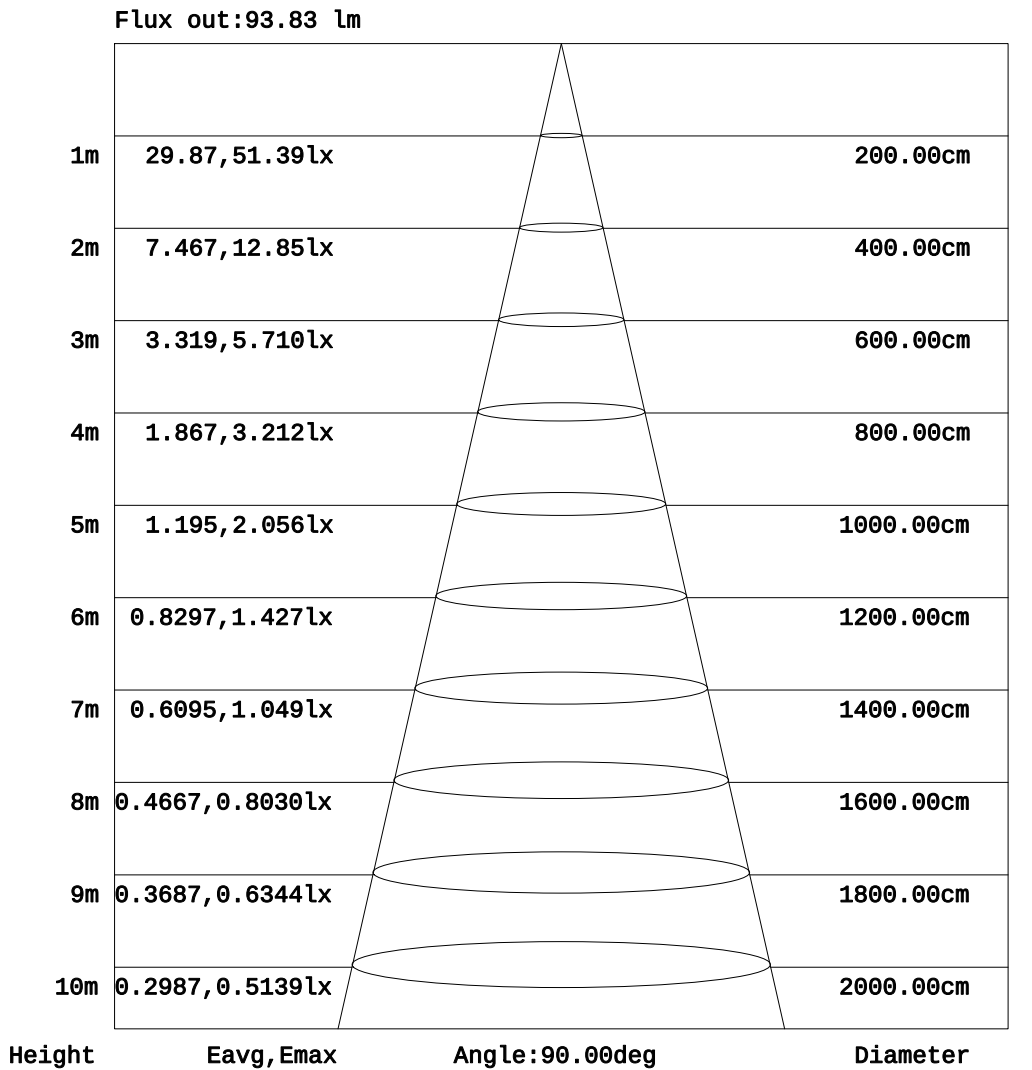


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:



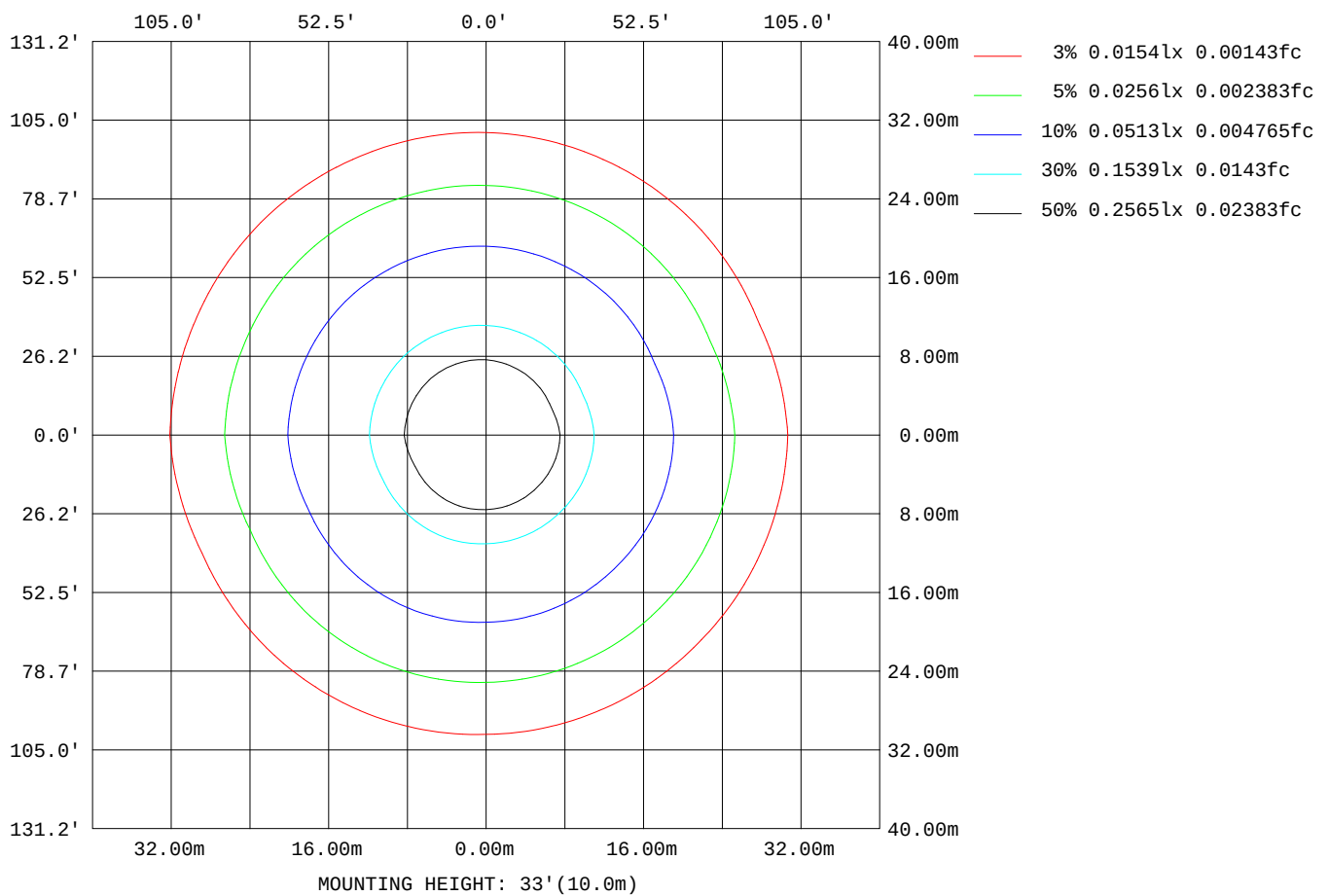
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-27

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:230.74V I:0.1360A P:13.174W PF:0.4199 Freq:49.99Hz Lamp Flux:324.597x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

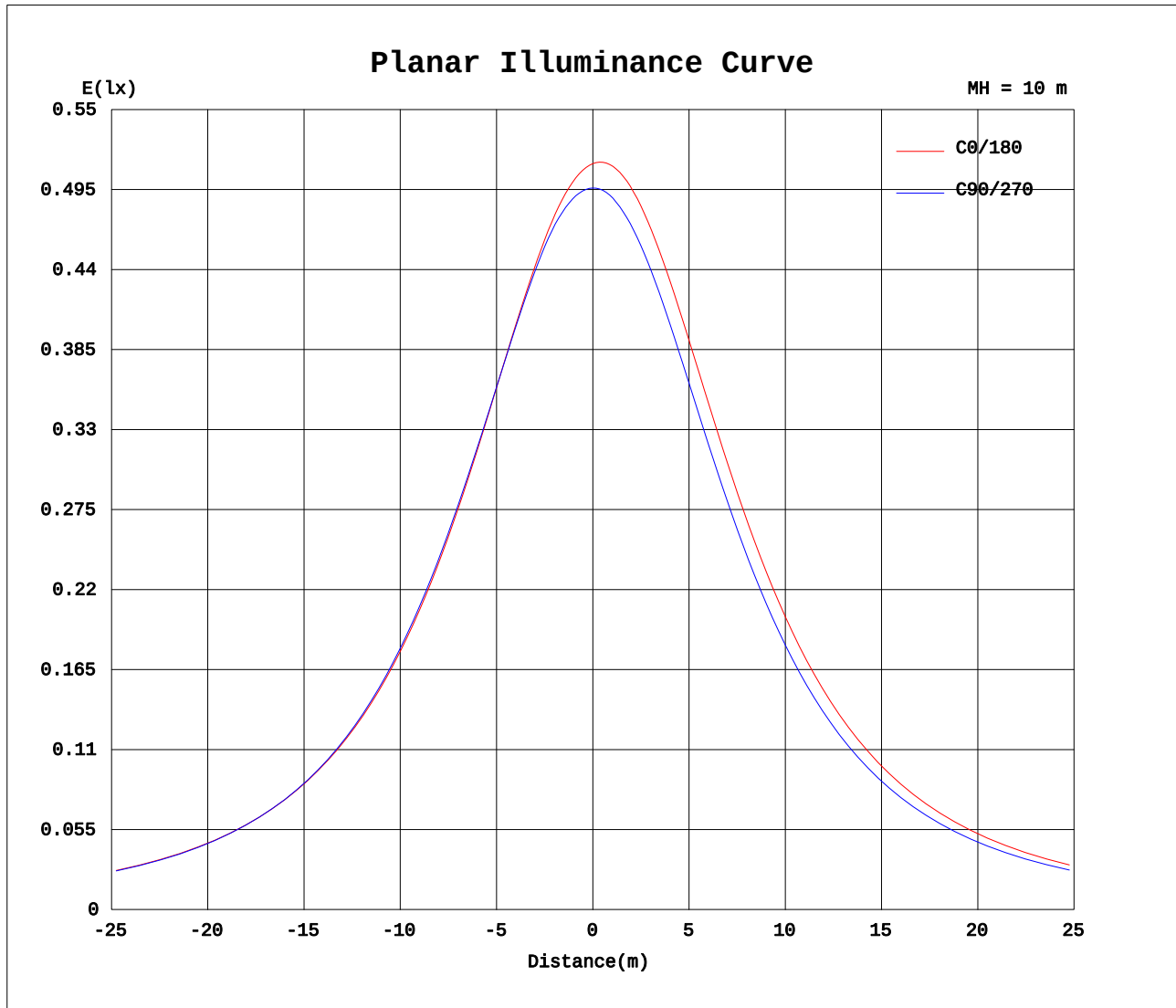
AvgL	cd/m2
L_0~180(65)av	18302
L_0~180(75)av	30034
L_0~180(85)av	87694
L_90~270(65)av	17146
L_90~270(75)av	27843
L_90~270(85)av	81593
L_45(65)av	17364
L_45(75)av	28243
L_45(85)av	82631

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-27

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: 2024-04-27

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:

```