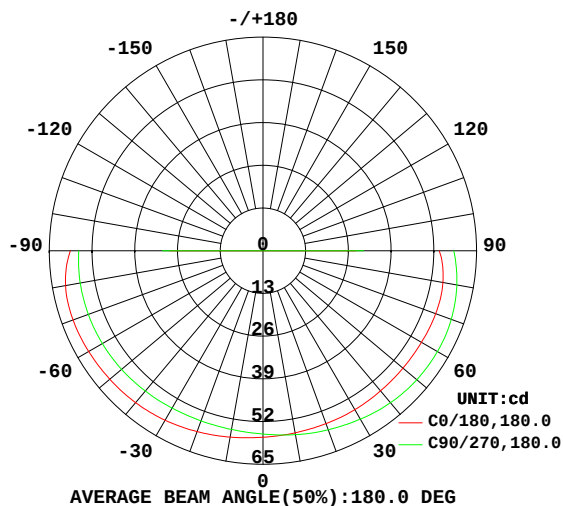


LUMINAIRE PHOTOMETRIC TEST REPORT

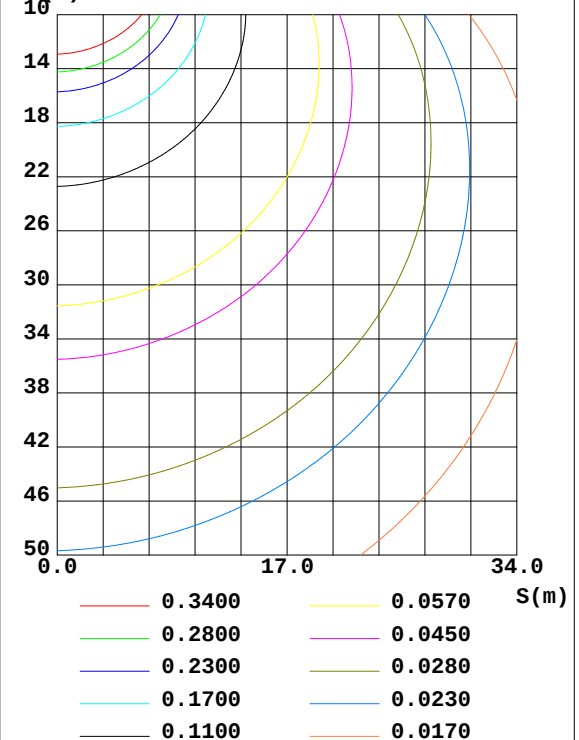
Test:U:230.74V I:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 27.38 lm/W			
MODEL	6000K	I _{max} (cd)	62.31	S/MH(C0/180)	1.62
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	1.53
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	362.39	η UP, DN(C0-180)	0.0, 50.8
NOMINAL FLUX(lm)	362.387	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.2
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:

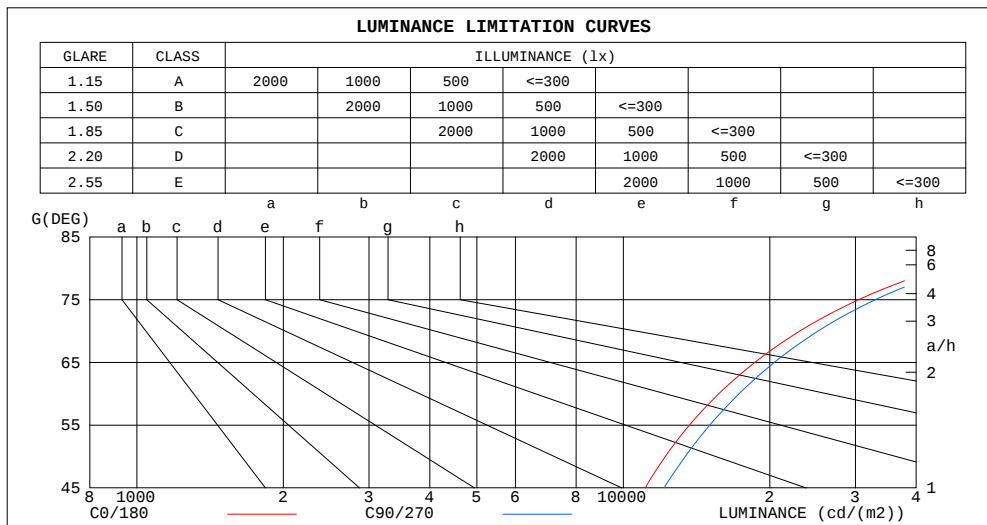
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	56.28	56.59	56.85	56.53	57.58	56.36	55.22	54.55	0- 10	5.349	5.349	1.48,1.48
20	56.00	56.98	57.99	57.97	58.57	56.64	55.10	54.11	10- 20	15.98	21.33	5.89,5.89
30	55.86	57.41	59.18	59.35	59.56	57.24	55.29	53.96	20- 30	26.31	47.64	13.1,13.1
40	55.67	57.74	60.37	60.49	60.33	57.95	55.73	54.06	30- 40	36.08	83.72	23.1,23.1
50	55.60	57.91	61.09	61.37	60.84	58.29	56.18	54.23	40- 50	44.85	128.6	35.5,35.5
60	55.70	57.93	61.31	61.95	61.27	58.48	56.46	54.45	50- 60	52.24	180.8	49.9,49.9
70	55.94	57.51	60.97	61.83	61.50	58.48	56.56	54.58	60- 70	57.89	238.7	65.9,65.9
80	55.59	56.50	59.88	60.89	61.00	58.14	56.48	54.43	70- 80	61.40	300.1	82.8,82.8
90	53.64	54.88	58.08	59.24	58.64	57.37	56.07	53.89	80- 90	62.29	362.4	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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	88827	95555
80	45156	48634
75	30481	32981
70	23069	25144
65	18640	20440
60	15713	17294
55	13673	15056
50	12200	13406
45	11094	12127

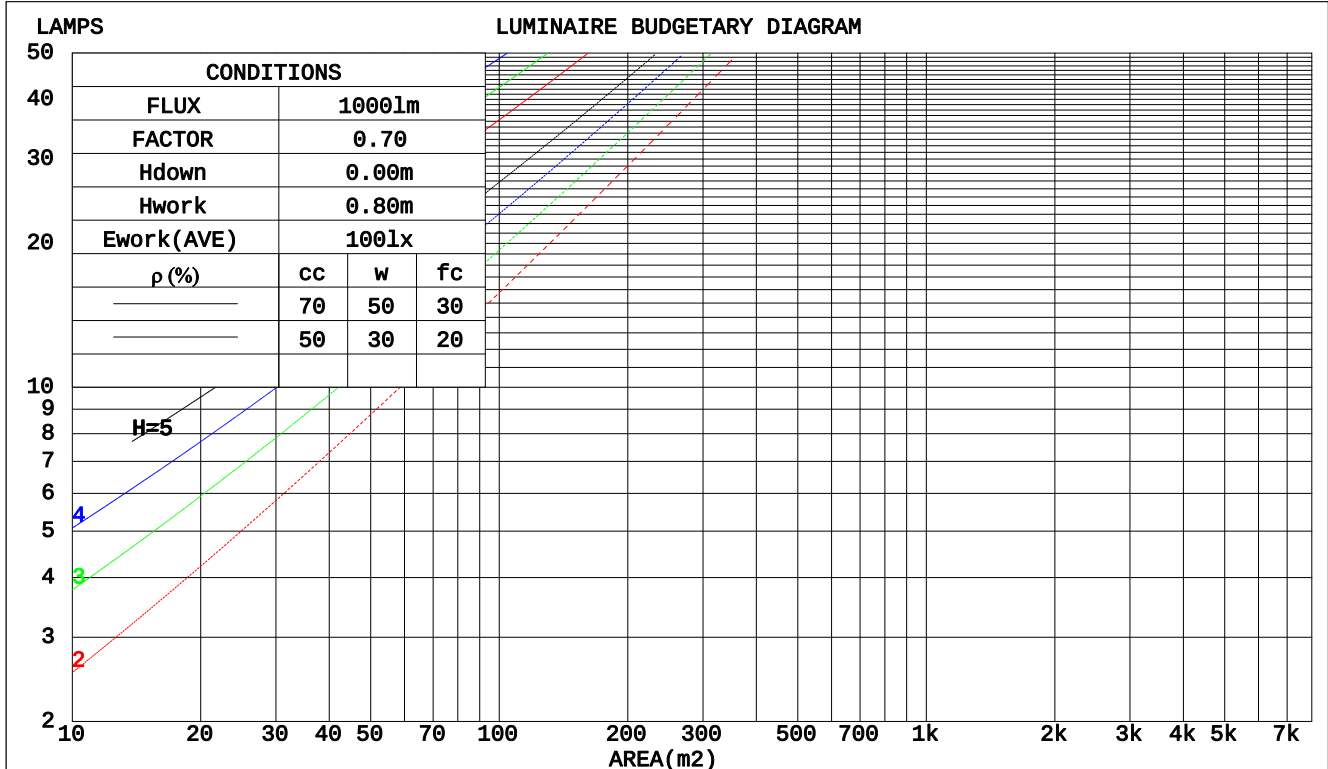
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-27

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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 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	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	.92	.85	.78	.90	.83	.77	.85	.79	.74	.81	.76	.72	.77	.73	.70	.67
2.0	.76	.66	.58	.74	.65	.57	.70	.62	.55	.67	.60	.54	.63	.58	.53	.50
3.0	.65	.54	.45	.63	.53	.44	.60	.51	.43	.57	.49	.42	.54	.47	.42	.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	.46	.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	.20	.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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 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	.532	.303	.096	.524	.299	.095	.510	.293	.093	.497	.286	.092	.484	.281	.091		
2.0	.428	.235	.072	.421	.232	.071	.408	.227	.070	.396	.222	.070	.385	.218	.069		
3.0	.364	.194	.058	.358	.192	.058	.347	.188	.057	.336	.184	.056	.326	.181	.056		
4.0	.318	.165	.049	.313	.164	.048	.303	.160	.048	.293	.157	.047	.284	.154	.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	.032	.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	.196	.095	.027	.193	.094	.026	.188	.093	.026	.183	.092	.026	.178	.090	.026		
10.0	.182	.087	.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	.101	.115	.091	.070	.066	.053	.040	.021	.017	.013	
2.0	.190	.131	.082	.163	.113	.070	.112	.078	.049	.064	.045	.029	.021	.015	.009	
3.0	.183	.115	.061	.157	.099	.053	.107	.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	.016	.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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 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	27.3	25.7	27.5	27.7	25.8	27.7	26.1	27.9	28.2	
	3H	28.6	30.4	28.9	30.6	30.9	29.1	30.9	29.4	31.1	
	4H	30.4	32.1	30.8	32.4	32.7	30.9	32.6	31.3	32.9	
	6H	32.5	34.1	32.8	34.4	34.7	33.0	34.6	33.3	34.9	
	8H	33.6	35.2	34.0	35.5	35.8	34.1	35.7	34.5	36.0	
	12H	34.9	36.5	35.3	36.8	37.1	35.4	36.9	35.8	37.3	
4H	2H	26.5	28.2	26.9	28.5	28.8	26.8	28.5	27.2	28.8	
	3H	29.9	31.4	30.3	31.8	32.1	30.3	31.8	30.6	32.1	
	4H	31.9	33.3	32.3	33.7	34.0	32.3	33.7	32.7	34.0	
	6H	34.1	35.4	34.5	35.8	36.2	34.5	35.8	34.9	36.2	
	8H	35.3	36.6	35.7	36.9	37.3	35.7	37.0	36.2	37.4	
	12H	36.7	37.9	37.2	38.3	38.7	37.1	38.3	37.6	38.7	
8H	4H	32.7	34.0	33.1	34.3	34.8	33.0	34.3	33.4	34.6	
	6H	35.2	36.3	35.6	36.7	37.1	35.5	36.6	36.0	37.0	
	8H	36.6	37.6	37.1	38.0	38.5	36.9	38.0	37.4	38.4	
	12H	38.2	39.1	38.7	39.6	40.1	38.6	39.5	39.1	40.0	
12H	4H	33.0	34.1	33.4	34.5	35.0	33.2	34.4	33.7	34.8	
	6H	35.6	36.6	36.0	37.0	37.5	35.8	36.8	36.3	37.3	
	8H	37.1	38.0	37.6	38.4	38.9	37.4	38.3	37.9	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, 362.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.5)
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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

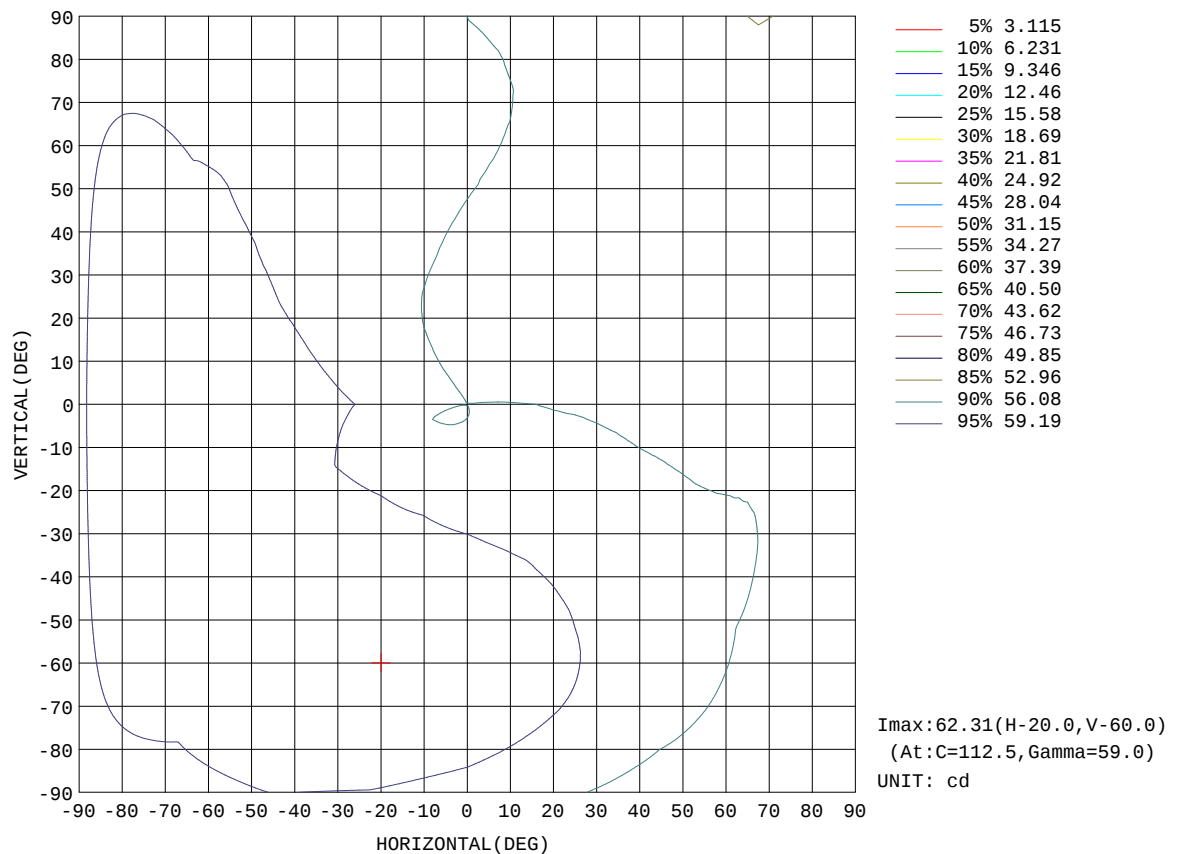
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	46	33	24	45	32	24	44	32	24	17
0.80	55	40	31	54	40	31	52	39	31	22
1.00	62	48	38	61	47	38	58	50	38	29
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	76	65	57	47
2.50	87	75	66	84	74	65	80	71	63	52
3.00	91	80	71	88	78	70	84	75	68	57
4.00	96	87	79	94	85	78	89	81	75	64
5.00	100	92	84	97	89	83	92	85	80	69
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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

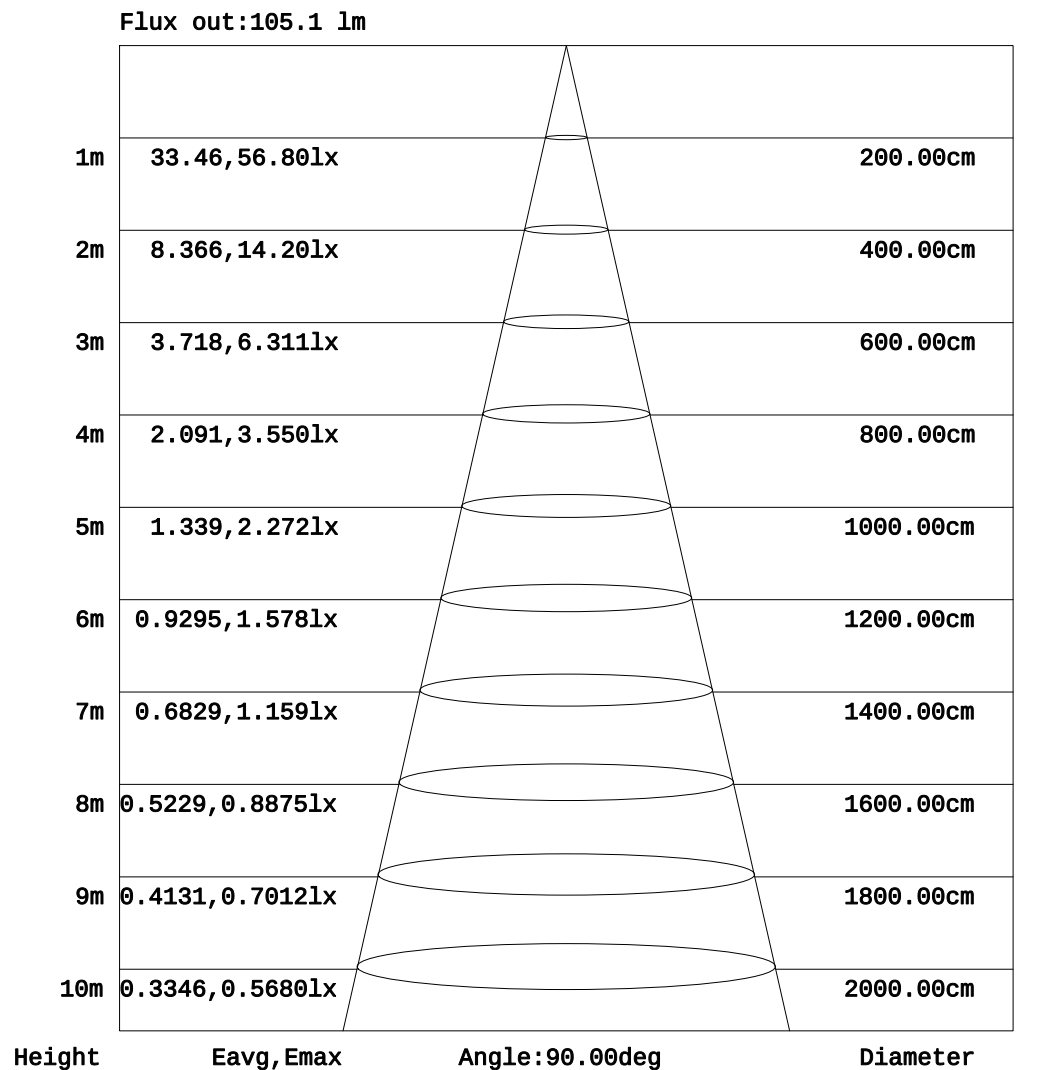


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-27

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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:



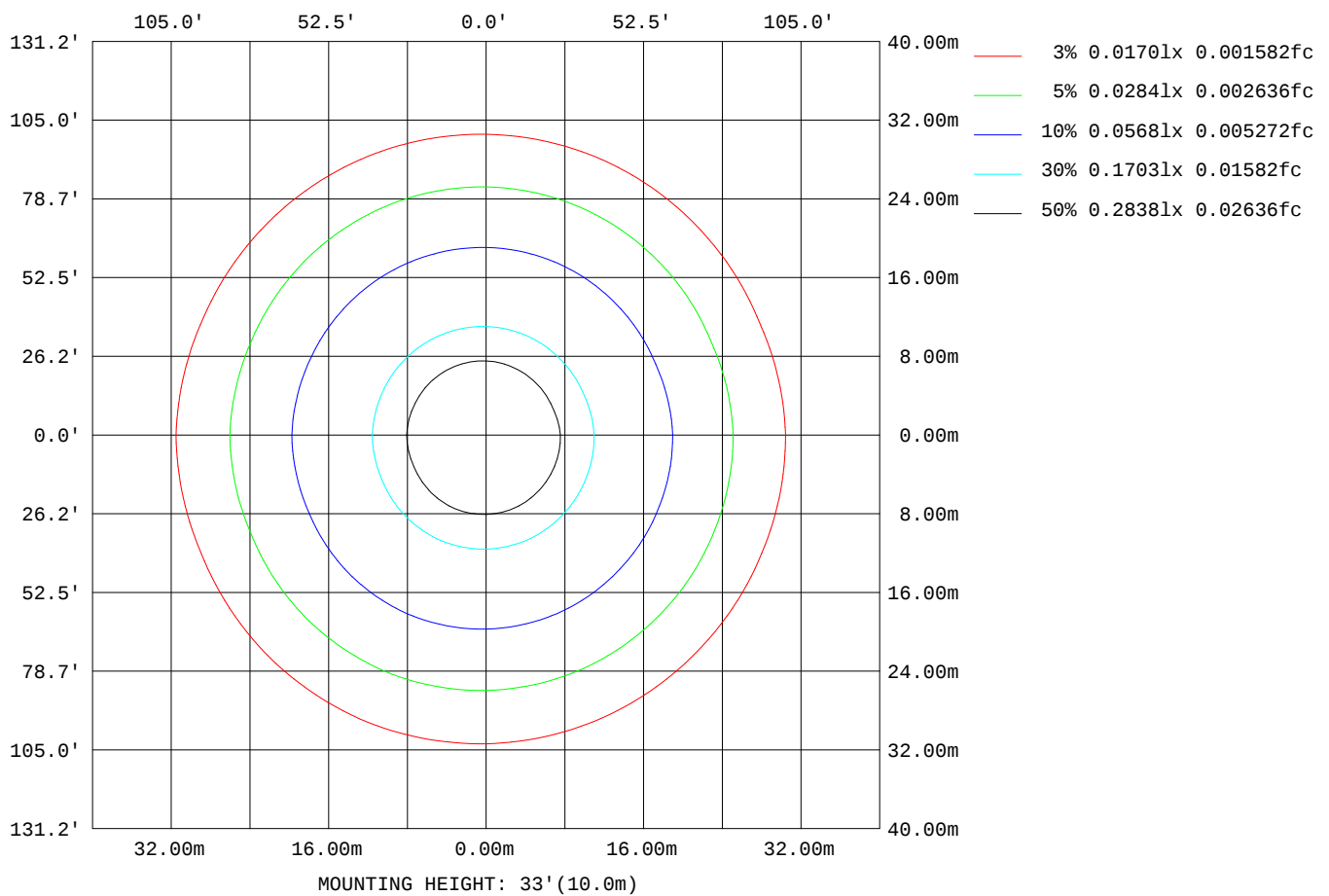
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 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:0.1353A P:13.236W PF:0.4239 Freq:49.99Hz Lamp Flux:362.387x1 lm		
NAME: FGB16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 95mm	Shielding Angle:

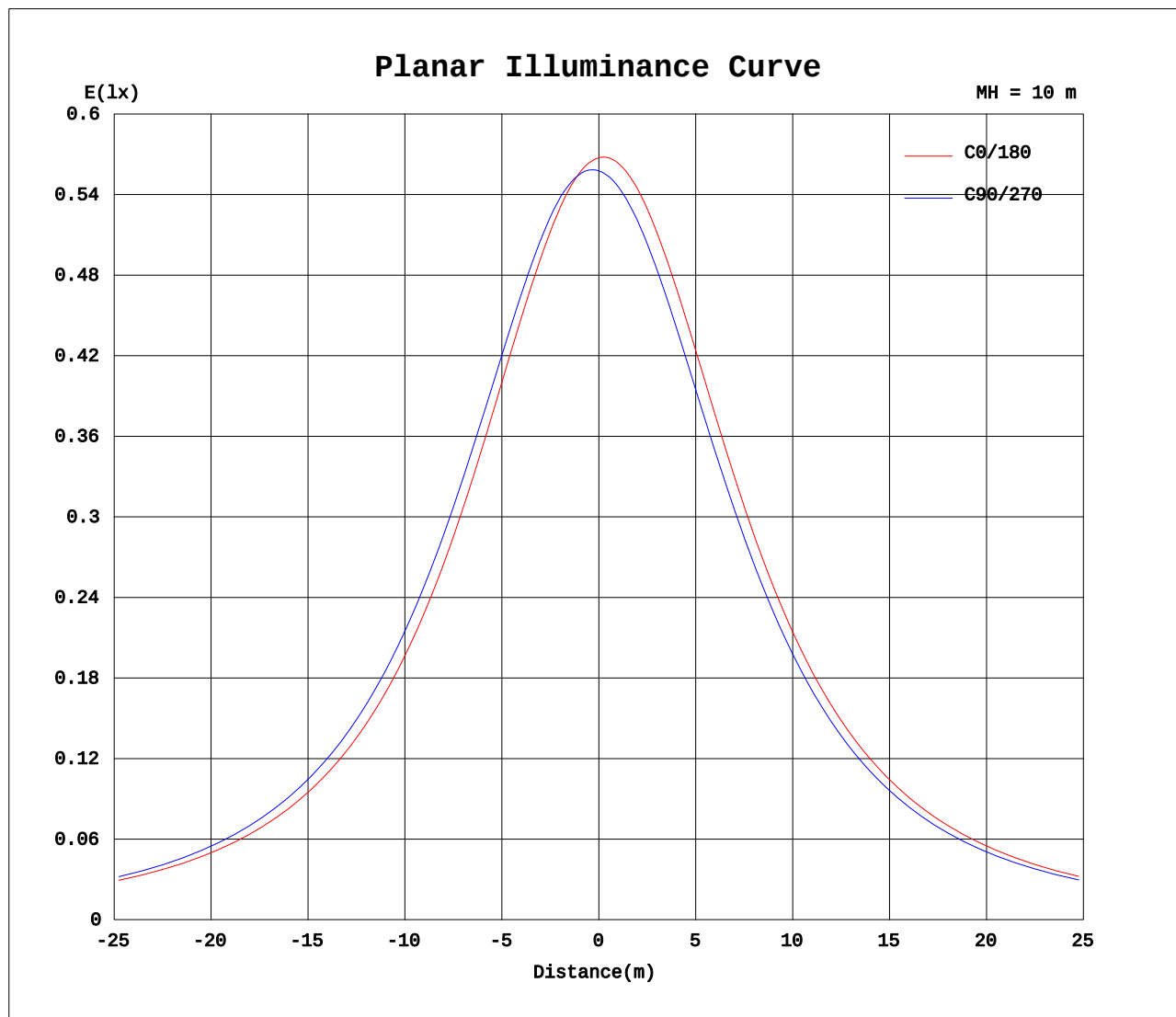
AvgL	cd/m2
L_0~180(65)av	19574
L_0~180(75)av	31980
L_0~180(85)av	93027
L_90~270(65)av	19655
L_90~270(75)av	31897
L_90~270(85)av	93338
L_45(65)av	19424
L_45(75)av	31539
L_45(85)av	92157

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:

```