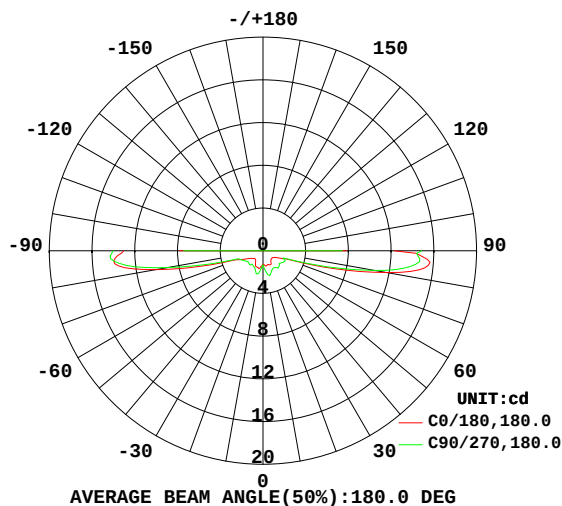


LUMINAIRE PHOTOMETRIC TEST REPORT

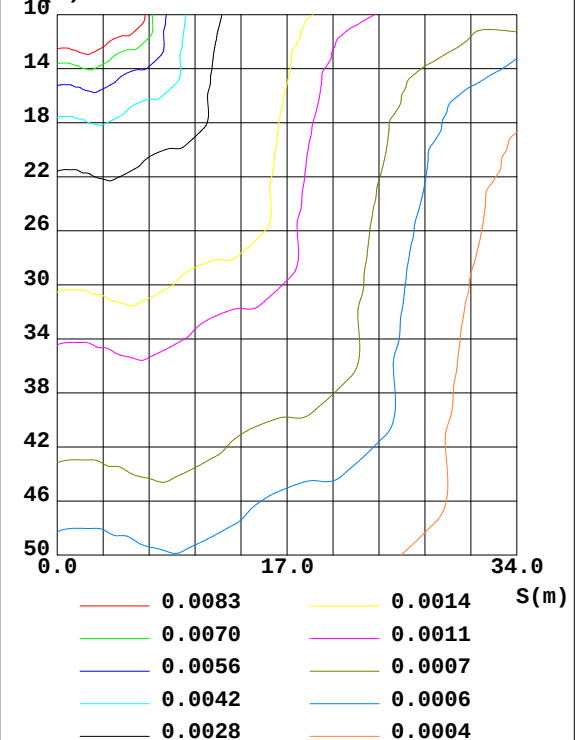
Test:U:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 2.83 lm/W
MODEL	6000K	I _{max} (cd)	17.67	S/MH(C0/180)	1.43	
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	1.95	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	28.718	η UP, DN(C0-180)	0.0, 52.0	
NOMINAL FLUX(lm)	28.7136	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.0	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.55	

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:2024-04-25

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:

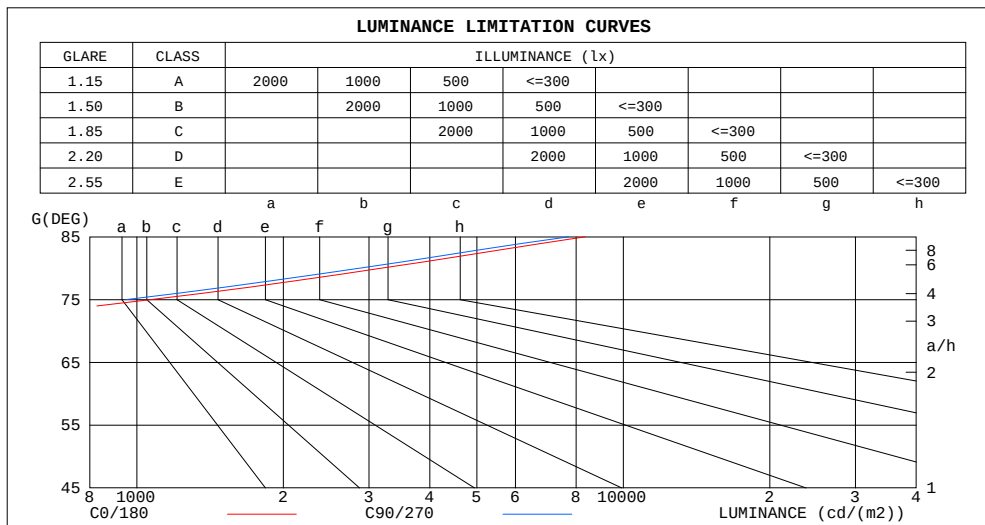
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1.459	1.837	2.157	1.860	1.629	1.800	2.020	1.745	0- 10	0.1553	0.1553	0.54,0.54
20	1.382	2.004	2.197	2.054	1.637	1.949	2.046	1.830	10- 20	0.5450	0.7004	2.44,2.44
30	1.482	1.737	1.899	1.699	1.432	1.582	1.718	1.653	20- 30	0.8072	1.508	5.25,5.25
40	1.166	1.975	2.088	1.640	1.088	1.402	1.661	1.707	30- 40	1.008	2.515	8.76,8.76
50	1.094	2.011	2.012	1.883	1.127	1.645	1.765	1.857	40- 50	1.282	3.798	13.2,13.2
60	1.251	2.412	2.169	2.339	1.464	1.950	1.923	2.216	50- 60	1.654	5.451	19,19
70	2.222	3.578	2.004	2.756	2.468	2.479	2.340	2.970	60- 70	2.352	7.803	27.2,27.2
80	11.80	12.93	10.65	8.385	10.25	7.854	9.138	11.75	70- 80	6.250	14.05	48.9,48.9
90	12.28	17.67	14.86	13.70	13.04	13.57	14.04	15.56	80- 90	14.66	28.72	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:2024-04-25

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	8343	7718
80	3178	2869
75	1070	952
70	304	274
65	178	252
60	117	203
55	92	166
50	80	146
45	73	139

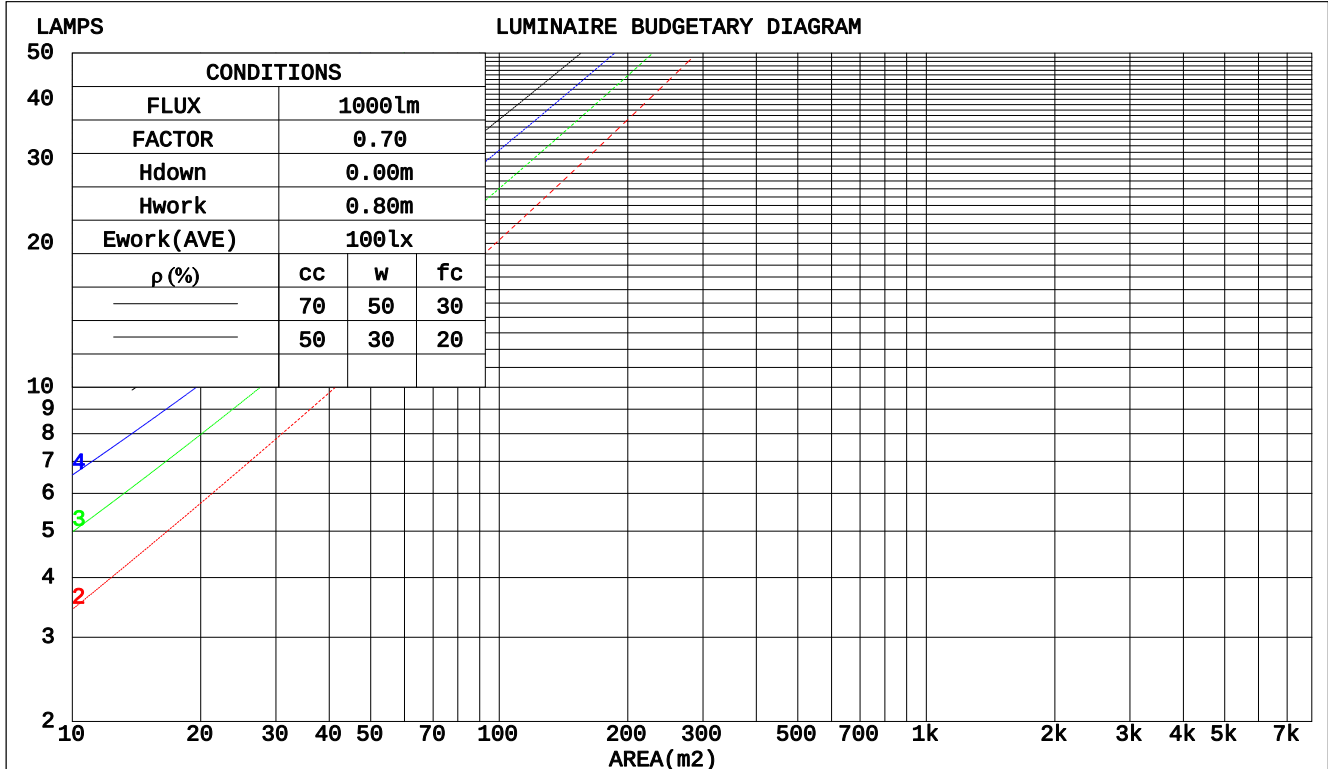
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-25

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	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	.74	.62	.51	.71	.60	.50	.66	.56	.48	.61	.53	.46	.57	.50	.44	.41
2.0	.58	.44	.32	.56	.42	.31	.51	.40	.30	.47	.37	.29	.43	.35	.28	.24
3.0	.48	.34	.23	.46	.33	.22	.43	.31	.22	.39	.29	.21	.36	.28	.20	.17
4.0	.42	.28	.18	.40	.27	.17	.37	.26	.17	.34	.24	.16	.32	.23	.16	.13
5.0	.37	.24	.14	.36	.23	.14	.33	.22	.14	.31	.21	.13	.28	.20	.13	.10
6.0	.33	.21	.12	.32	.20	.12	.30	.19	.12	.28	.19	.11	.26	.18	.11	.08
7.0	.30	.18	.10	.29	.18	.10	.27	.17	.10	.25	.17	.10	.24	.16	.10	.07
8.0	.27	.17	.09	.26	.16	.09	.25	.16	.09	.23	.15	.09	.22	.14	.09	.06
9.0	.25	.15	.08	.24	.15	.08	.23	.14	.08	.22	.14	.08	.21	.13	.08	.05
10.0	.23	.14	.07	.23	.13	.07	.21	.13	.07	.20	.13	.07	.19	.12	.07	.05



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

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:

WEC AND CCEC

Test:U:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm					
NAME: WL16-BK6W24V			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+6000K			DIM.:		SERIAL No.:
MFR.:			SUR.: 165mm		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	.883	.502	.159	.875	.499	.158	.858	.492	.157	.843	.487	.156	.830	.481	.155		
2.0	.604	.331	.102	.596	.328	.101	.582	.323	.100	.568	.319	.100	.556	.314	.099		
3.0	.469	.250	.075	.462	.247	.074	.449	.243	.074	.438	.240	.074	.427	.236	.073		
4.0	.386	.201	.059	.380	.199	.059	.369	.196	.058	.359	.193	.058	.349	.190	.058		
5.0	.330	.168	.049	.325	.167	.049	.315	.164	.048	.306	.162	.048	.298	.159	.048		
6.0	.289	.145	.041	.285	.144	.041	.276	.141	.041	.268	.139	.041	.261	.137	.041		
7.0	.258	.127	.036	.254	.126	.036	.246	.124	.036	.239	.123	.036	.232	.121	.036		
8.0	.233	.114	.032	.229	.113	.032	.223	.111	.032	.216	.110	.032	.210	.108	.031		
9.0	.212	.103	.029	.209	.102	.029	.203	.101	.029	.198	.099	.028	.193	.098	.028		
10.0	.195	.094	.026	.193	.093	.026	.187	.092	.026	.182	.091	.026	.178	.089	.026		

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	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.220	.151	.089	.188	.130	.077	.129	.089	.053	.074	.052	.031	.024	.017	.010	
2.0	.214	.130	.060	.183	.112	.052	.126	.078	.036	.072	.045	.021	.023	.015	.007	
3.0	.203	.116	.046	.174	.100	.040	.119	.069	.028	.069	.040	.017	.022	.013	.005	
4.0	.191	.104	.038	.164	.090	.033	.113	.063	.023	.065	.037	.014	.021	.012	.005	
5.0	.179	.095	.032	.154	.082	.028	.106	.057	.020	.061	.034	.012	.020	.011	.004	
6.0	.168	.087	.028	.144	.075	.025	.100	.052	.017	.058	.031	.010	.019	.010	.003	
7.0	.158	.080	.025	.136	.069	.022	.094	.048	.016	.054	.029	.009	.018	.009	.003	
8.0	.148	.074	.023	.128	.064	.020	.088	.045	.014	.051	.027	.008	.017	.009	.003	
9.0	.140	.069	.021	.121	.060	.018	.083	.042	.013	.049	.025	.008	.016	.008	.003	
10.0	.132	.064	.019	.114	.056	.017	.079	.039	.012	.046	.023	.007	.015	.008	.002	

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

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm											
NAME: WL16-BK6W24V						TYPE:			WEIGHT:		
SPEC.: black RA90 3000K+6000K						DIM.:			SERIAL No.:		
MFR.:						SUR.: 165mm			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		15.6	17.8	15.9	18.0	18.3	16.8	19.0	17.2	19.3	19.5
	3H	20.7	22.8	21.0	23.0	23.3	20.3	22.4	20.7	22.7	23.0
	4H	26.3	28.4	26.7	28.7	29.0	25.5	27.6	25.9	27.9	28.2
	6H	32.6	34.6	33.0	34.9	35.3	31.9	33.9	32.3	34.2	34.5
	8H	35.4	37.4	35.8	37.7	38.1	34.7	36.7	35.1	37.0	37.4
	12H	38.0	39.9	38.4	40.2	40.6	37.4	39.3	37.8	39.6	40.0
4H	2H	17.7	19.7	18.0	20.0	20.3	18.3	20.3	18.7	20.6	21.0
	3H	23.5	25.4	23.9	25.8	26.1	22.8	24.8	23.2	25.1	25.5
	4H	28.9	30.8	29.4	31.2	31.6	28.1	30.0	28.6	30.4	30.8
	6H	34.7	36.5	35.2	36.9	37.3	34.0	35.8	34.5	36.2	36.6
	8H	37.4	39.1	37.8	39.5	39.9	36.8	38.5	37.2	38.9	39.3
	12H	39.9	41.5	40.4	42.0	42.4	39.3	41.0	39.8	41.4	41.9
8H	4H	31.1	32.8	31.6	33.2	33.7	30.7	32.4	31.2	32.8	33.3
	6H	36.6	38.1	37.0	38.6	39.0	36.1	37.6	36.5	38.1	38.5
	8H	39.2	40.7	39.7	41.1	41.6	38.7	40.2	39.2	40.6	41.1
	12H	41.7	43.1	42.2	43.6	44.1	41.3	42.7	41.8	43.1	43.6
12H	4H	32.1	33.7	32.5	34.1	34.6	31.8	33.5	32.3	33.9	34.4
	6H	37.3	38.7	37.7	39.2	39.7	36.9	38.4	37.4	38.8	39.3
	8H	39.9	41.3	40.4	41.7	42.2	39.5	40.9	40.0	41.4	41.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.3					
2.0H	+ 0.4 / - 0.5					+ 0.4 / - 0.5					

CIE Pub.117, 28.71 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -12.3)
Area: 0.02138 m2

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

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:

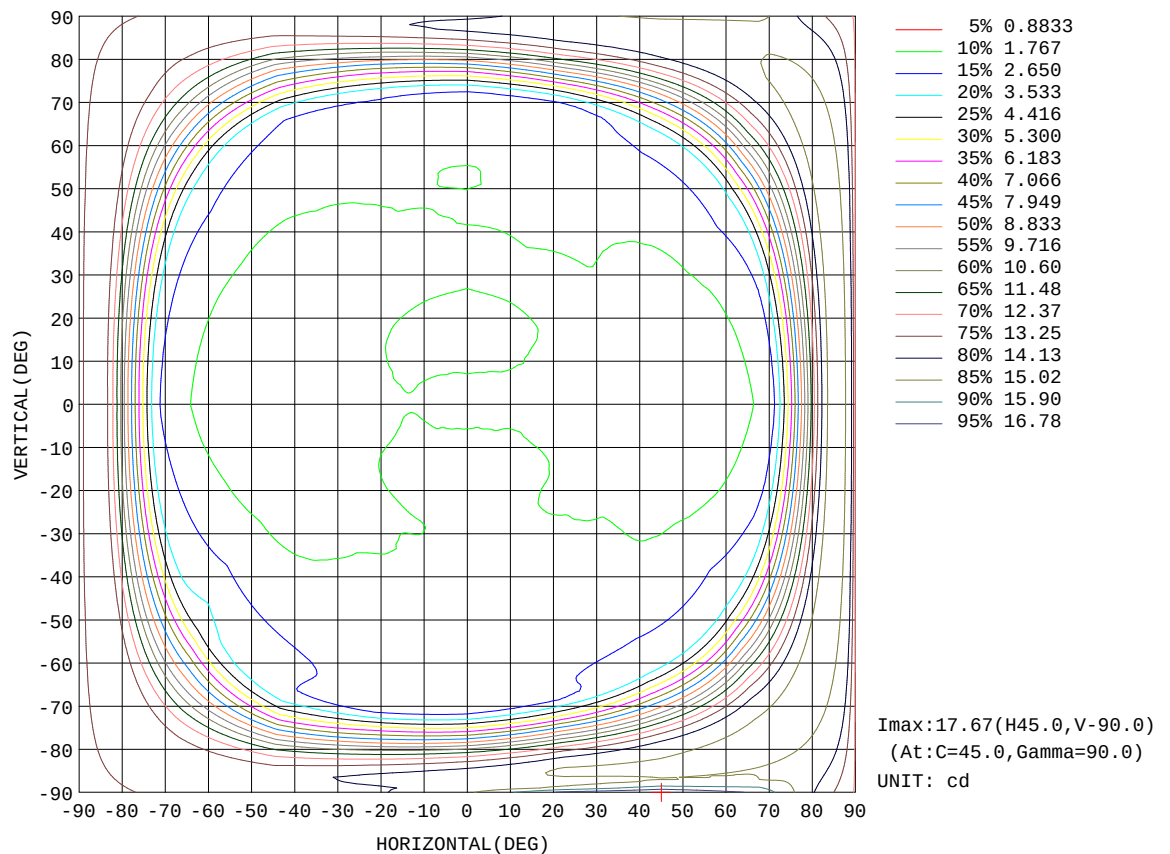
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	39	24	15	38	23	15	36	23	14	6
0.80	45	29	19	44	28	18	42	27	18	8
1.00	51	34	22	49	33	22	46	36	21	11
1.25	56	38	26	54	37	26	50	36	25	13
1.50	60	42	30	58	41	29	54	39	28	16
2.00	67	49	36	64	48	35	59	45	34	21
2.50	72	55	41	69	53	40	63	50	39	25
3.00	76	59	46	73	57	45	67	54	43	29
4.00	82	67	54	78	64	53	72	60	50	35
5.00	86	72	60	82	70	58	76	65	55	41
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:2024-04-25

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:

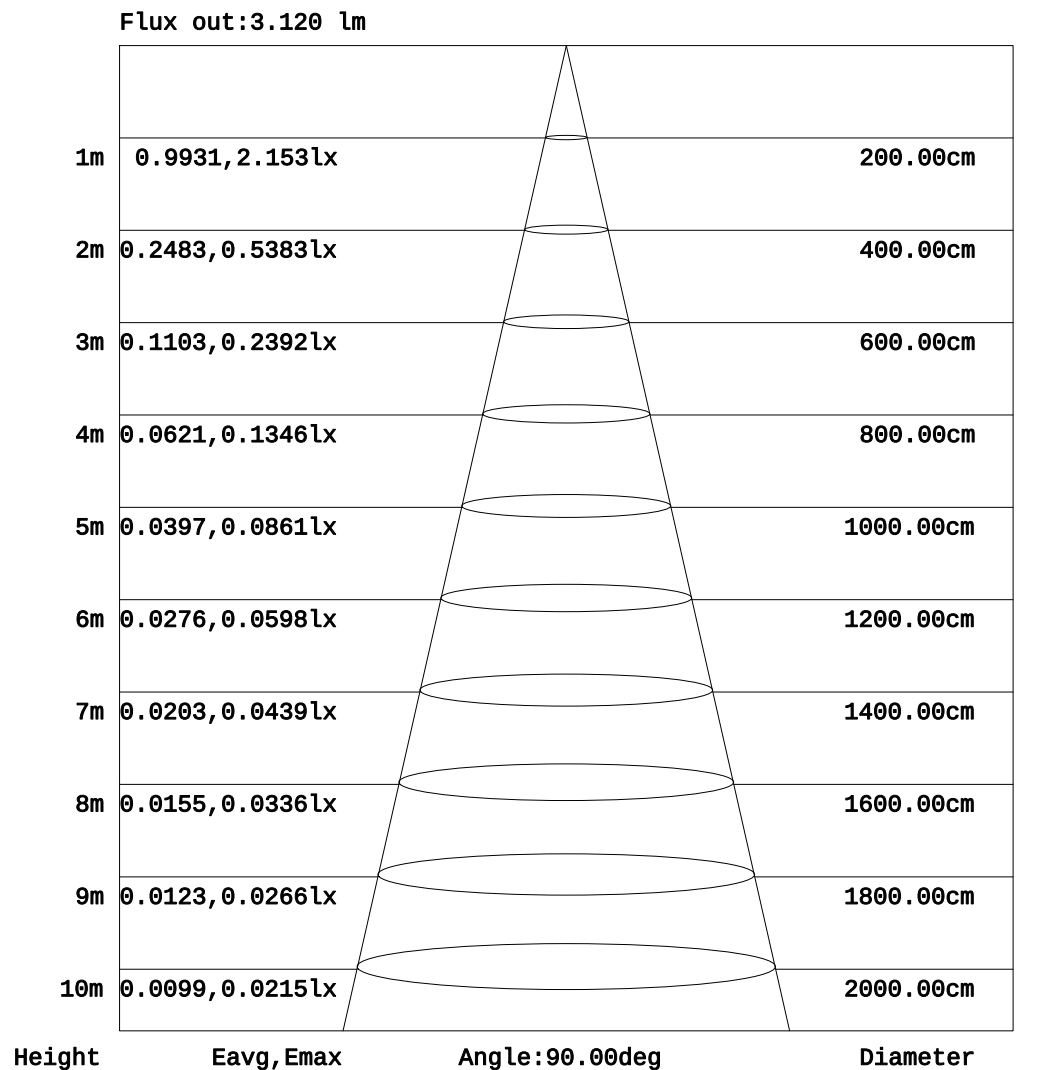


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-25

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:



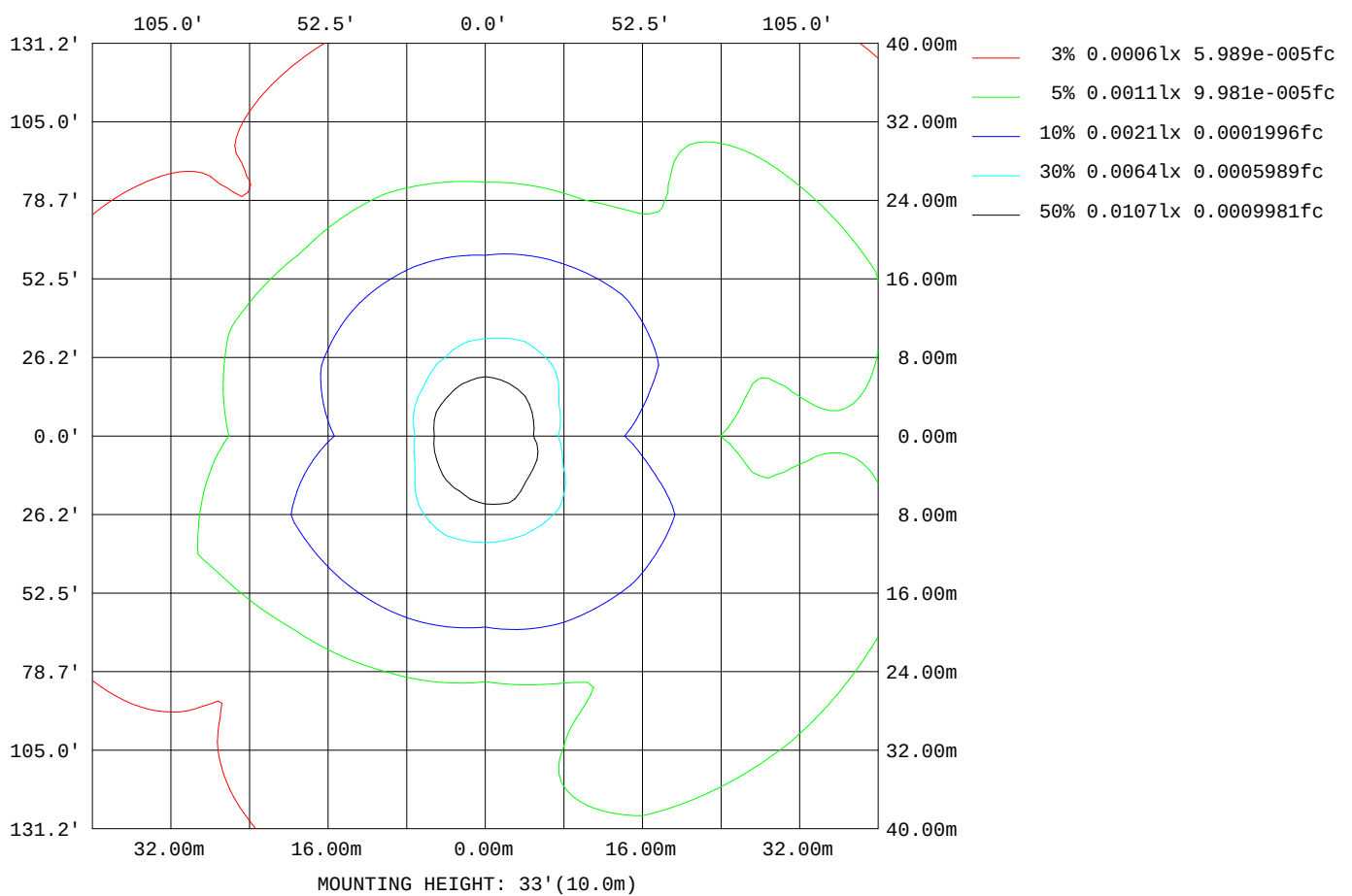
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:



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

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:230.75V I:0.1056A P:10.152W PF:0.4164 Freq:49.99Hz Lamp Flux:28.7136x1 lm		
NAME: WL16-BK6W24V	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+6000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 165mm	Shielding Angle:

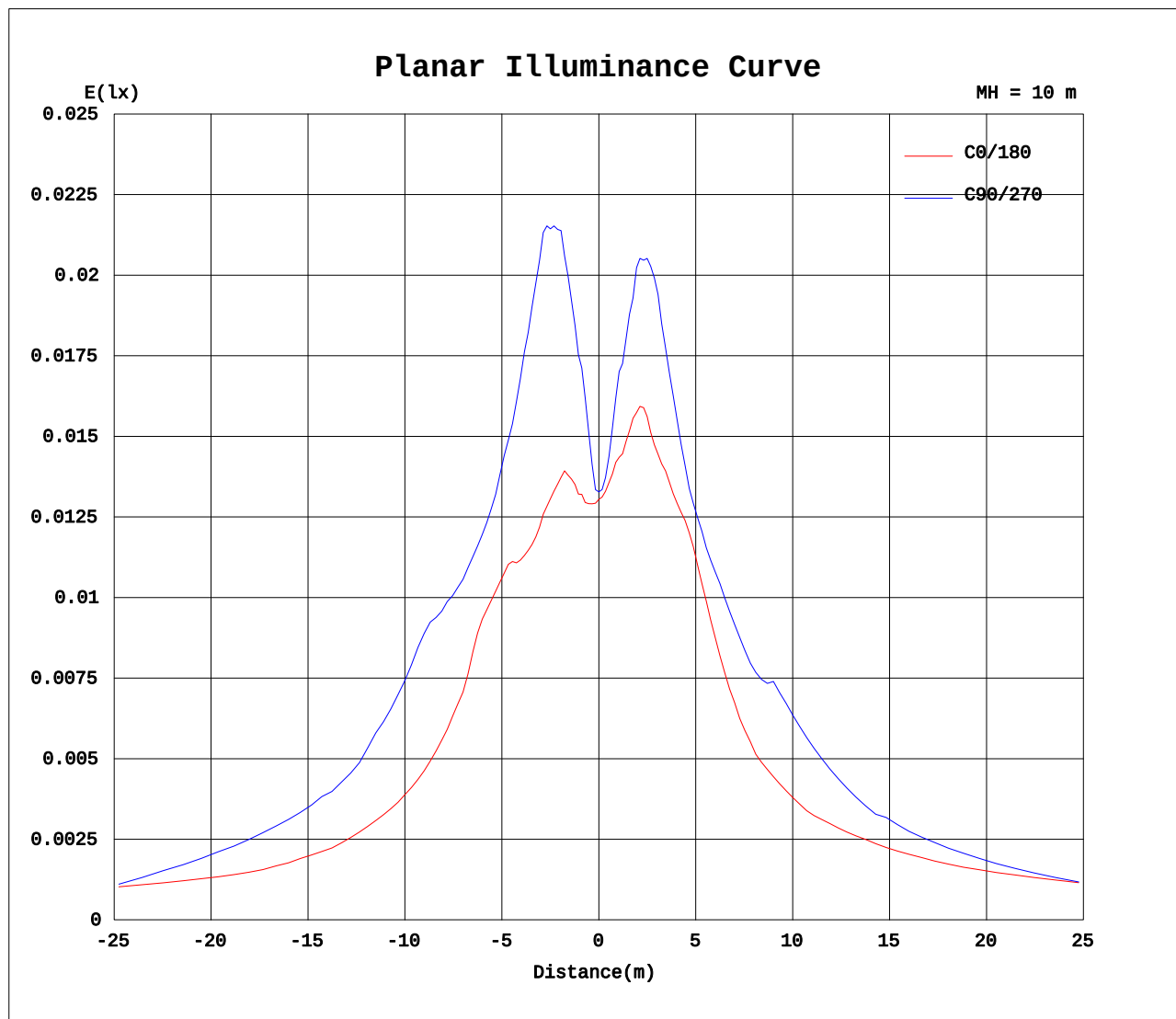
AvgL	cd/m2
L_0~180(65)av	192
L_0~180(75)av	995
L_0~180(85)av	7910
L_90~270(65)av	243
L_90~270(75)av	866
L_90~270(85)av	7488
L_45(65)av	282
L_45(75)av	978
L_45(85)av	7382

Standard: GB/T 29293-2012

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

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: 2024-04-25

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:

```