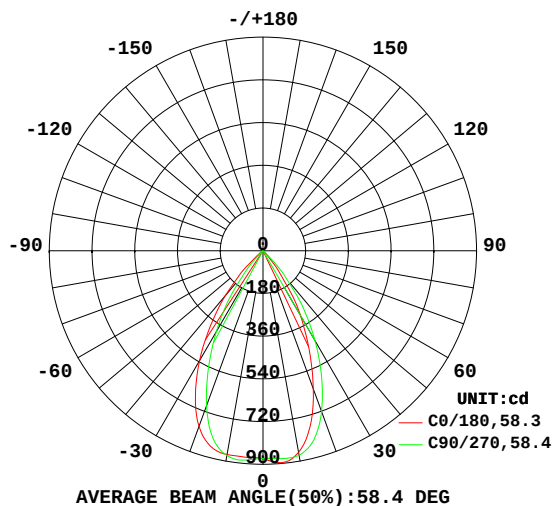


LUMINAIRE PHOTOMETRIC TEST REPORT

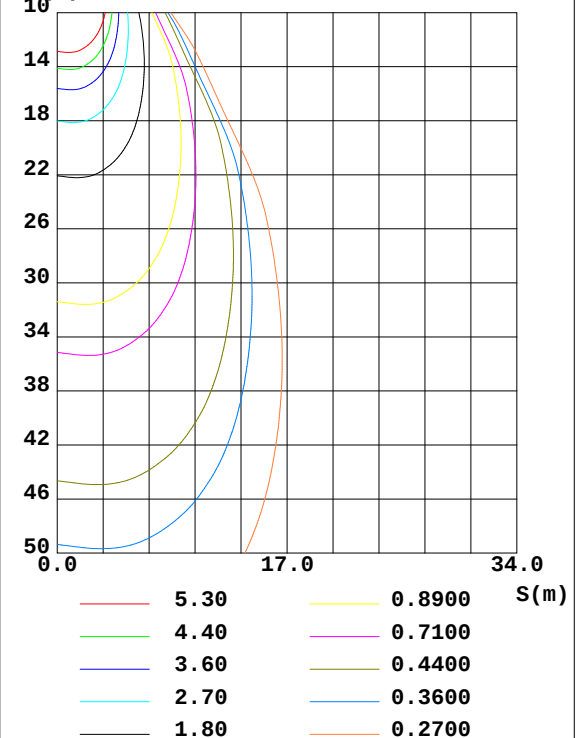
Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.57 lm/W			
MODEL	ML12111202 3000K	I _{max} (cd)	896.4	S/MH(C0/180)	0.98
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.87
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	795.40	η UP, DN(C0-180)	0.0, 50.1
NOMINAL FLUX(lm)	795.395	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.90

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: 2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

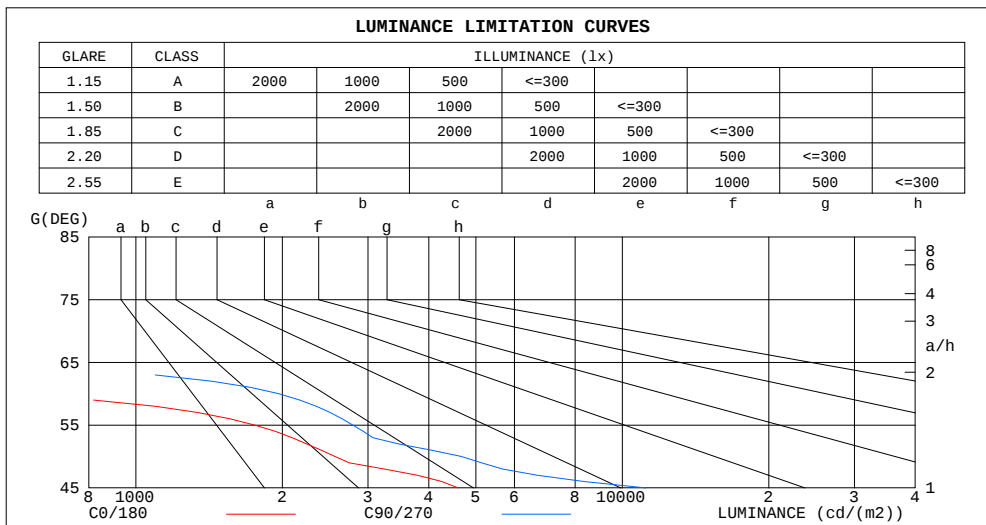
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	862.2	870.5	875.2	869.6	871.8	877.7	876.1	863.4	0- 10	83.88	83.88	10.5,10.5
20	620.4	655.6	722.1	761.8	788.4	759.3	695.5	630.2	10- 20	225.5	309.3	38.9,38.9
30	317.0	361.8	440.7	514.8	535.1	480.5	393.0	325.0	20- 30	256.7	566.0	71.2,71.2
40	60.13	95.41	156.8	221.6	248.1	189.1	117.7	73.26	30- 40	171.3	737.4	92.7,92.7
50	9.349	10.69	16.99	24.12	28.07	20.52	14.11	9.557	40- 50	48.03	785.4	98.7,98.7
60	1.392	2.908	5.574	7.183	7.625	6.323	4.148	2.028	50- 60	8.266	793.7	99.8,99.8
70	0.1160	0.1352	0.1661	0.1893	0.1656	0.1312	0.1158	0.0846	60- 70	1.646	795.3	100,100
80	0.0232	0.0271	0.0464	0.0658	0.0345	0.0076	0	0	70- 80	0.0802	795.4	100,100
90	0.0463	0.0540	0.0116	0.0077	0	0	0	0	80- 90	0.0128	795.4	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:2024-11-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.00.428
 Humidity:65.0%
 Test Distance:7.450m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	31	39
80	24	47
75	40	66
70	60	86
65	77	309
60	491	1966
55	1753	2792
50	2565	4662
45	4597	11181

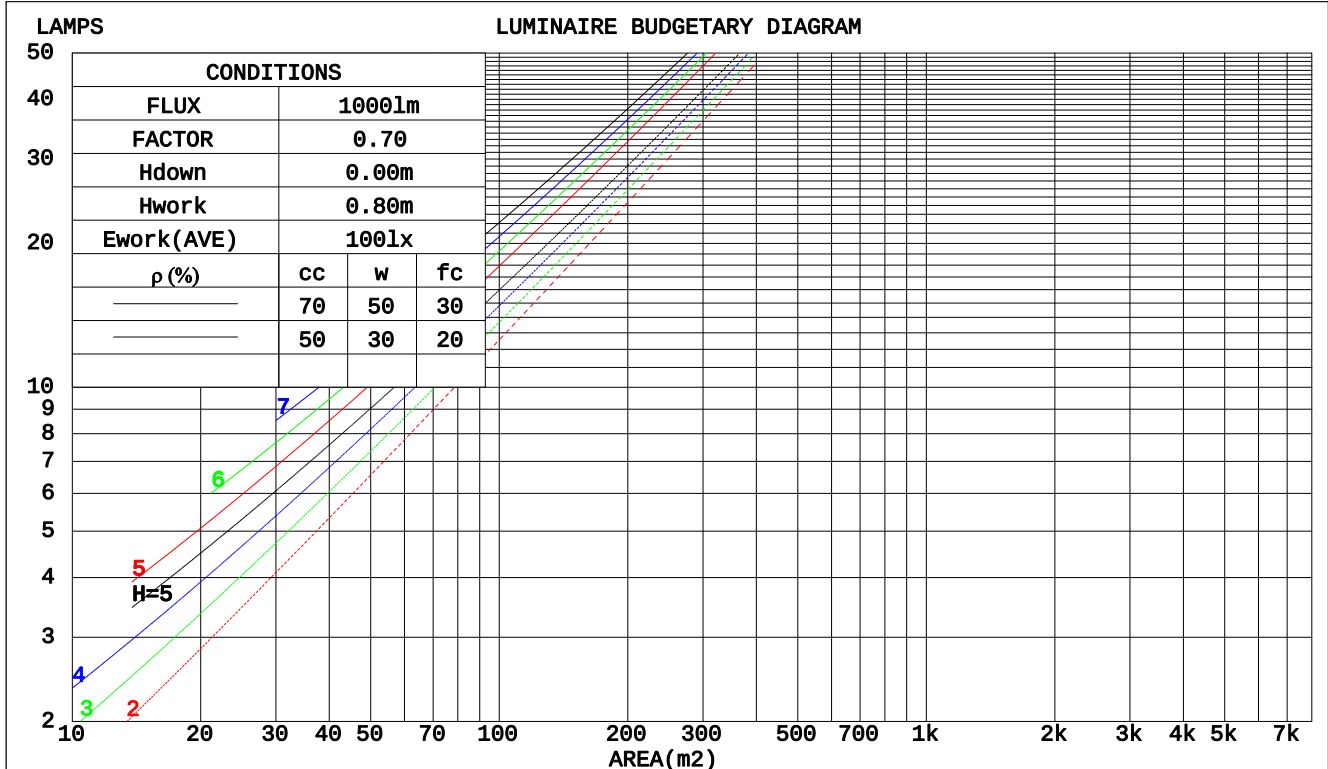
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	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	1.11	1.08	1.06	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2.0	1.03	.99	.96	1.01	.98	.95	.98	.95	.93	.95	.93	.91	.92	.91	.89	.87
3.0	.96	.91	.87	.95	.90	.87	.92	.88	.85	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.84	.80	.89	.84	.80	.87	.82	.79	.85	.81	.78	.83	.80	.77	.75
5.0	.84	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.72	.78	.75	.72	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66
7.0	.74	.68	.64	.74	.68	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.62
8.0	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.58
9.0	.66	.60	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
10.0	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.53	.60	.55	.52	.51



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-11-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm					
NAME: DL9453-BK3K10C03			TYPE:		WEIGHT:
SPEC.: black RA90			DIM.:		SERIAL No.:
MFR.:			SUR.: 85mm		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	.177	.100	.032	.170	.097	.031	.157	.090	.029	.146	.084	.027	.135	.078	.025		
2.0	.170	.093	.029	.164	.090	.028	.153	.085	.026	.144	.081	.025	.135	.076	.024		
3.0	.162	.086	.026	.157	.084	.025	.148	.080	.024	.140	.077	.023	.132	.073	.023		
4.0	.155	.080	.024	.150	.079	.023	.143	.076	.023	.135	.073	.022	.129	.070	.021		
5.0	.148	.075	.022	.144	.074	.022	.137	.071	.021	.131	.069	.021	.125	.067	.020		
6.0	.141	.071	.020	.138	.070	.020	.132	.068	.020	.126	.066	.019	.121	.064	.019		
7.0	.135	.067	.019	.132	.066	.019	.127	.064	.018	.122	.062	.018	.117	.061	.018		
8.0	.129	.063	.018	.127	.062	.018	.122	.061	.017	.118	.060	.017	.113	.058	.017		
9.0	.124	.060	.017	.122	.059	.017	.117	.058	.016	.113	.057	.016	.110	.056	.016		
10.0	.119	.057	.016	.117	.056	.016	.113	.055	.016	.109	.054	.015	.106	.053	.015		

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.156	.133	.113	.134	.114	.098	.092	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.144	.114	.090	.123	.098	.078	.085	.068	.054	.049	.040	.032	.016	.013	.011		
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009		
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007		
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006		
7.0	.111	.071	.042	.096	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005		
8.0	.106	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.101	.059	.031	.087	.051	.027	.060	.036	.019	.035	.021	.011	.011	.007	.004		
10.0	.096	.055	.027	.083	.048	.024	.058	.033	.017	.034	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2024-11-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.00.428
 Humidity:65.0%
 Test Distance:7.450m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm										
NAME: DL9453-BK3K10C03					TYPE:			WEIGHT:		
SPEC.: black RA90					DIM.:			SERIAL No.:		
MFR.:					SUR.: 85mm			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	15.7	16.7	16.0	16.9	17.0	18.1	19.1	18.4	19.3	19.4
3H	15.6	16.4	15.8	16.6	16.9	18.0	18.8	18.2	19.0	19.2
4H	15.5	16.3	15.8	16.5	16.8	17.9	18.7	18.2	18.9	19.2
6H	15.4	16.2	15.7	16.4	16.7	17.8	18.6	18.1	18.8	19.1
8H	15.4	16.1	15.7	16.3	16.6	17.7	18.5	18.1	18.7	19.0
12H	15.3	16.0	15.6	16.3	16.6	17.7	18.4	18.0	18.7	19.0
4H 2H	15.5	16.3	15.8	16.5	16.8	17.9	18.7	18.2	18.9	19.2
3H	15.3	16.0	15.6	16.3	16.6	17.7	18.4	18.0	18.7	19.0
4H	15.2	15.9	15.6	16.2	16.5	17.6	18.3	18.0	18.6	18.9
6H	15.1	15.7	15.5	16.0	16.4	17.5	18.1	17.9	18.4	18.8
8H	15.1	15.6	15.5	16.0	16.3	17.5	18.0	17.9	18.3	18.7
12H	15.0	15.5	15.4	15.9	16.3	17.4	17.9	17.8	18.3	18.7
8H 4H	15.1	15.6	15.5	16.0	16.3	17.5	18.0	17.9	18.3	18.7
6H	15.0	15.4	15.4	15.8	16.2	17.4	17.8	17.8	18.2	18.6
8H	14.9	15.3	15.4	15.7	16.2	17.3	17.7	17.8	18.1	18.5
12H	14.9	15.2	15.3	15.6	16.1	17.3	17.6	17.7	18.0	18.5
12H 4H	15.0	15.5	15.4	15.9	16.3	17.4	17.9	17.8	18.3	18.7
6H	14.9	15.3	15.4	15.7	16.2	17.3	17.7	17.8	18.1	18.5
8H	14.9	15.2	15.3	15.6	16.1	17.3	17.6	17.7	18.0	18.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 3.2 / -13.3					+ 4.5 / -12.9				
1.5H	+ 5.7 / - 8.6					+ 7.0 / -10.7				
2.0H	+ 4.8 / -21.0					+ 7.5 / -17.5				

CIE Pub.117, 795.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.8)
Area: 0.00567 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

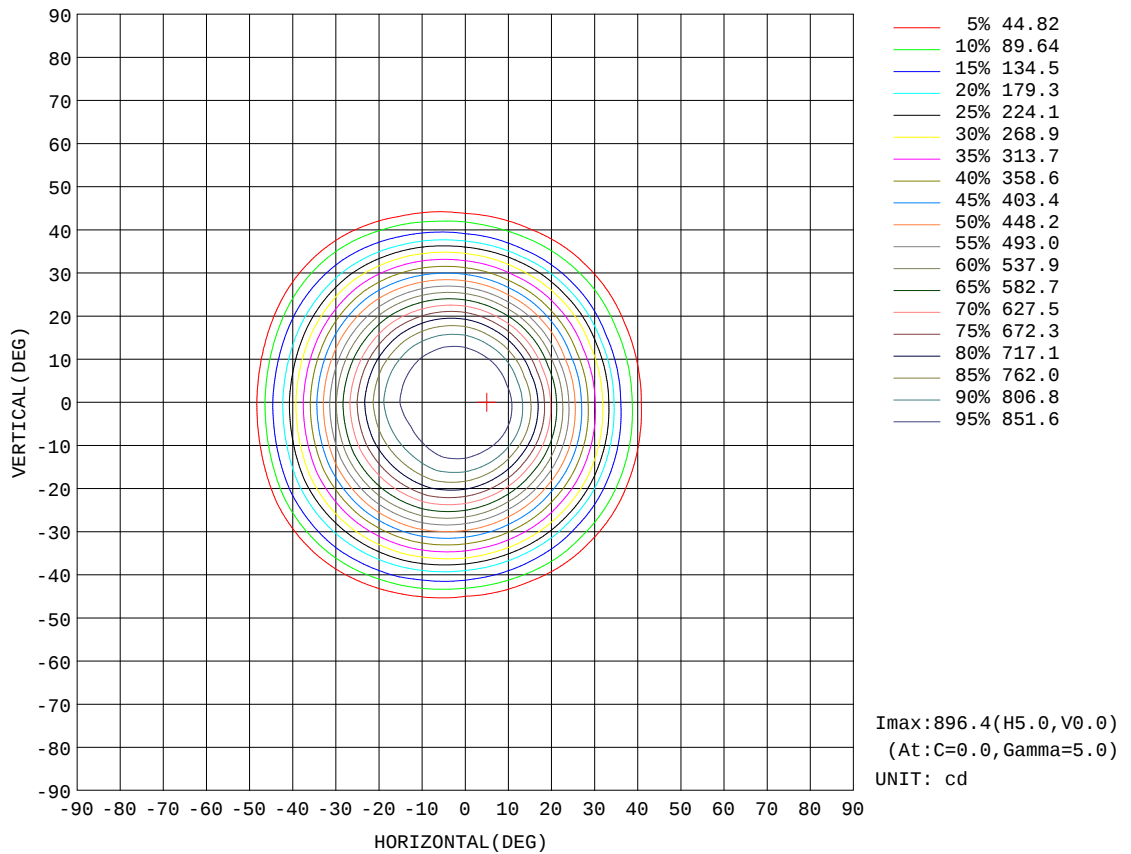
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	77	86	80	77	86	80	76	73
0.80	95	89	85	94	88	85	93	88	84	81
1.00	99	94	90	98	93	90	97	93	89	85
1.25	103	98	95	102	98	94	100	96	93	89
1.50	106	101	98	105	101	97	103	99	96	92
2.00	109	105	101	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	108	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	99
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: 2024-11-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000A_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

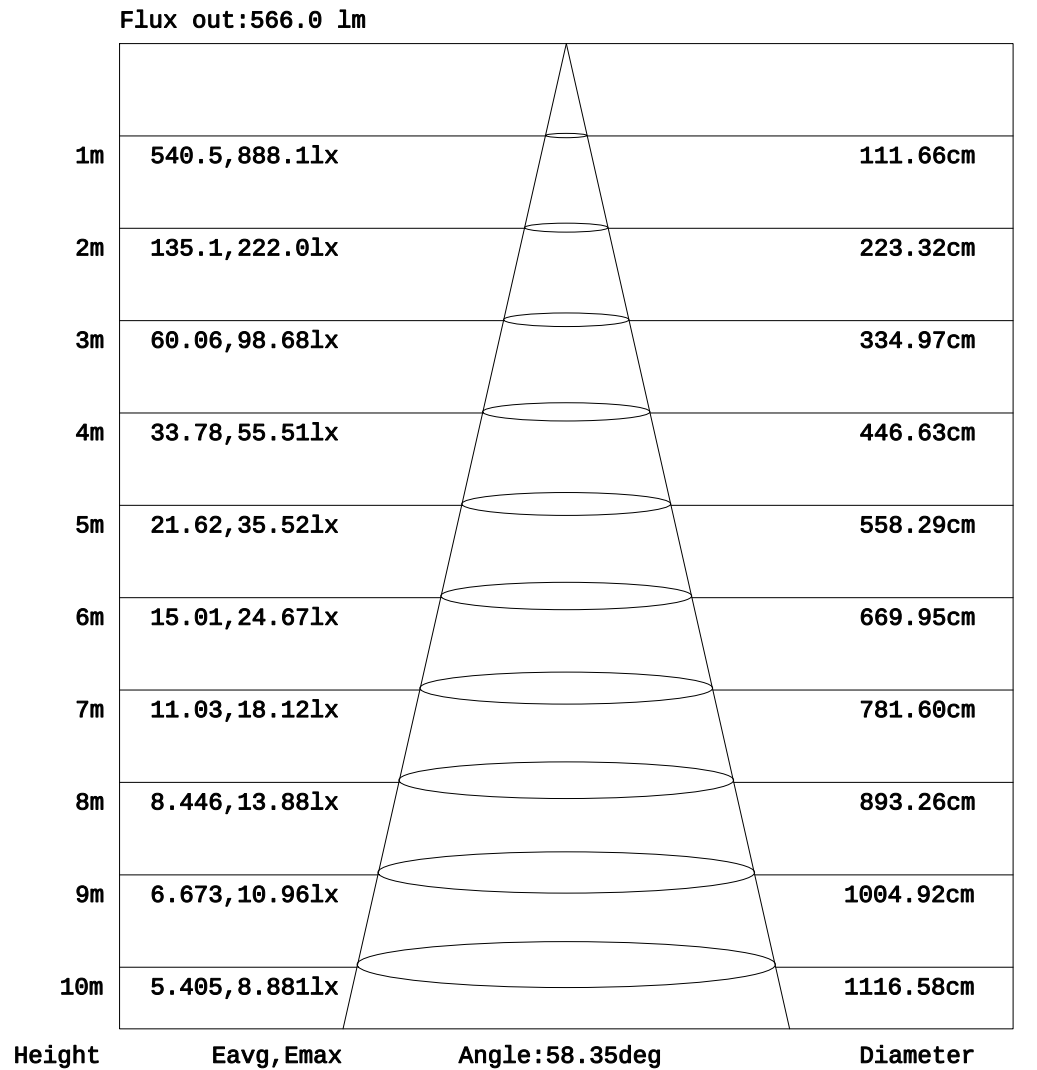


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



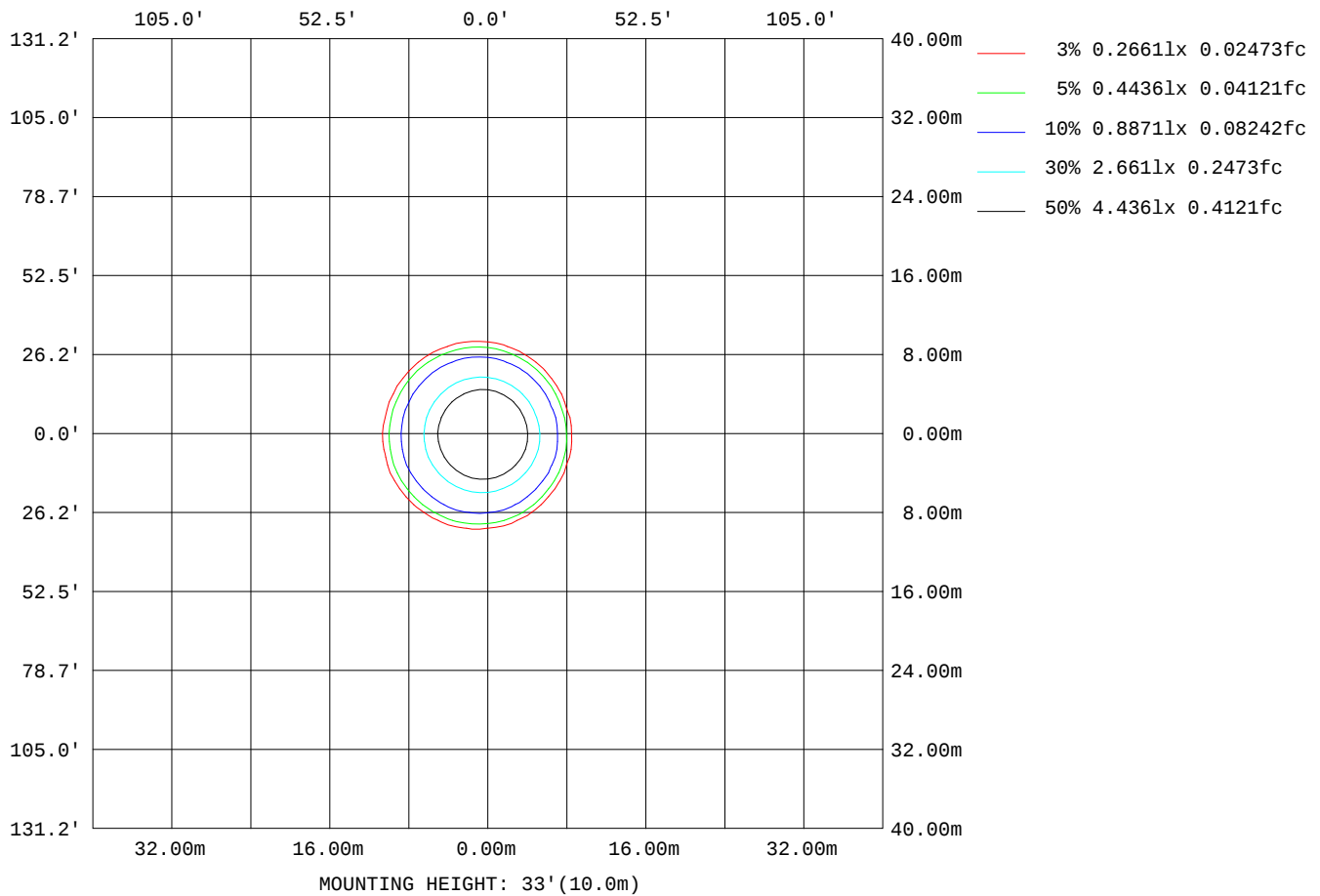
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.87V I:0.0469A P:10.525W PF:0.9716 Freq:49.99Hz Lamp Flux:795.395x1 lm		
NAME: DL9453-BK3K10C03	TYPE:	WEIGHT:
SPEC.: black RA90	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

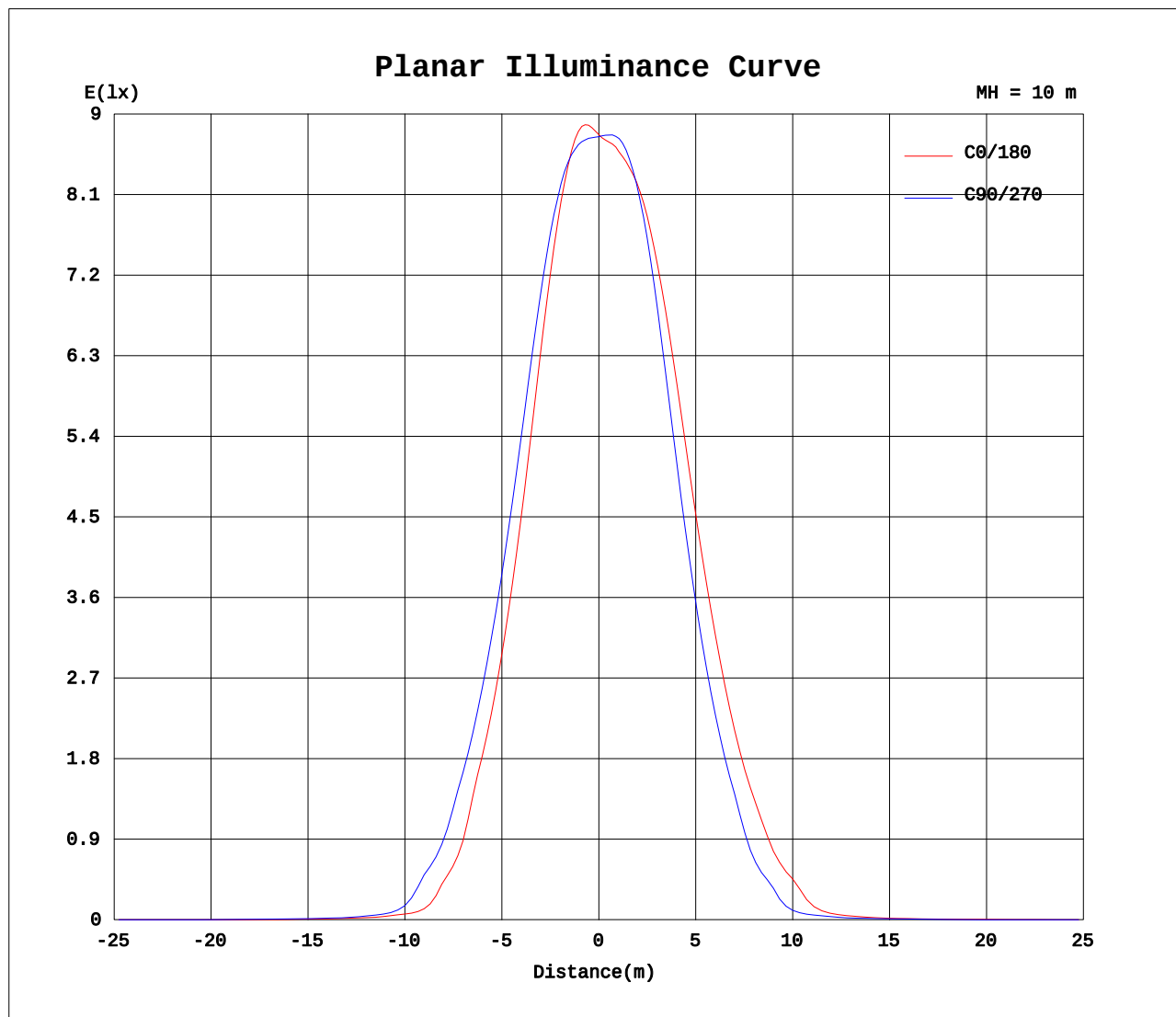
AvgL	cd/m2
L_0~180(65)av	851
L_0~180(75)av	55
L_0~180(85)av	16
L_90~270(65)av	203
L_90~270(75)av	50
L_90~270(85)av	20
L_45(65)av	597
L_45(75)av	47
L_45(85)av	20

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-11-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_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: 2024-11-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_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-2000A_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

```