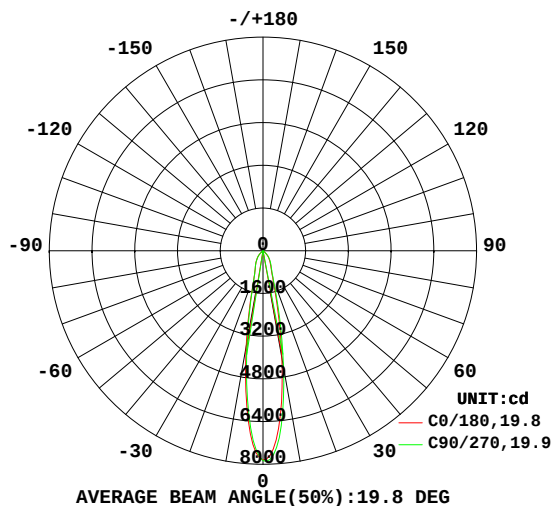


LUMINAIRE PHOTOMETRIC TEST REPORT

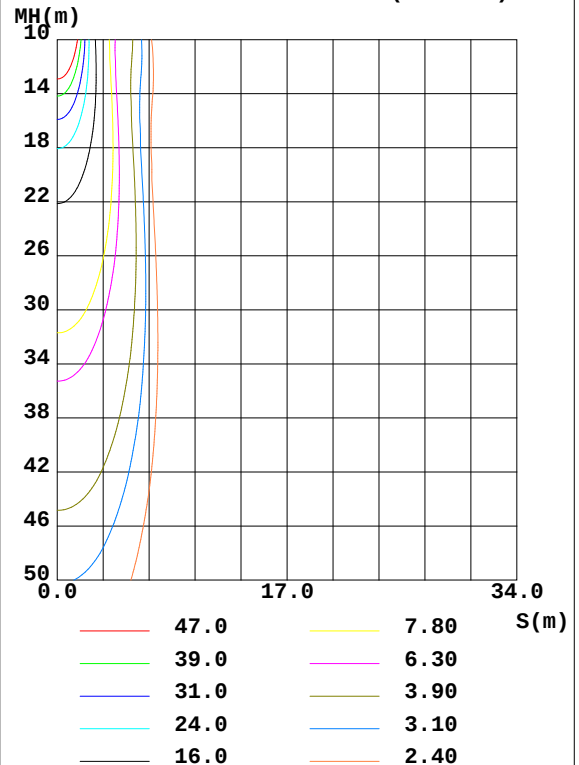
Test:U:230.59V I:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 93.86 lm/W			
MODEL	ML25141209 5700K	I _{max} (cd)	7895	S/MH(C0/180)	0.32
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.31
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1895.4	η UP, DN(C0-180)	0.0, 53.4
NOMINAL FLUX(lm)	1895.4	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 46.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
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:2024-04-18

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:

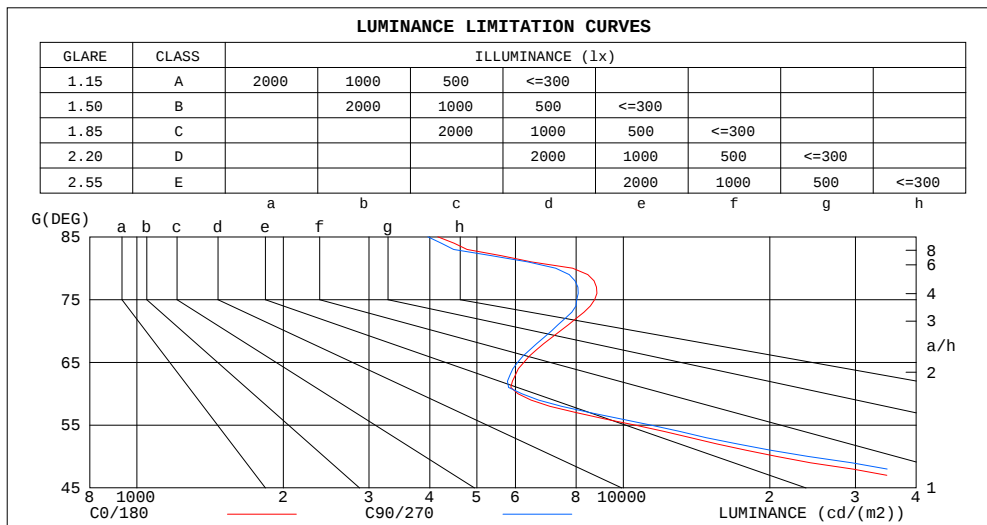
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	4097	4573	4442	3982	3637	3386	3406	3677	0- 10	537.5	537.5	28.4, 28.4
20	1069	1170	1127	994.4	925.7	908.7	925.1	951.9	10- 20	547.4	1085	57.2, 57.2
30	562.2	604.4	592.6	540.7	538.5	551.9	539.7	519.7	20- 30	335.0	1420	74.9, 74.9
40	323.5	360.9	343.9	297.8	310.9	332.5	306.5	279.7	30- 40	265.9	1686	88.9, 88.9
50	75.27	92.42	87.31	75.33	70.35	66.67	64.37	64.95	40- 50	146.5	1832	96.7, 96.7
60	17.20	18.35	17.53	16.62	16.98	17.53	17.37	16.26	50- 60	32.61	1865	98.4, 98.4
70	14.38	13.68	13.80	13.09	15.05	15.50	15.73	13.71	60- 70	15.24	1880	99.2, 99.2
80	7.743	7.466	7.147	7.296	7.352	6.591	6.591	7.009	70- 80	12.60	1893	99.9, 99.9
90	0.2085	0.1930	0.1814	0.1853	0.2548	0.6717	0.7837	0.4131	80- 90	2.754	1895	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: 2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



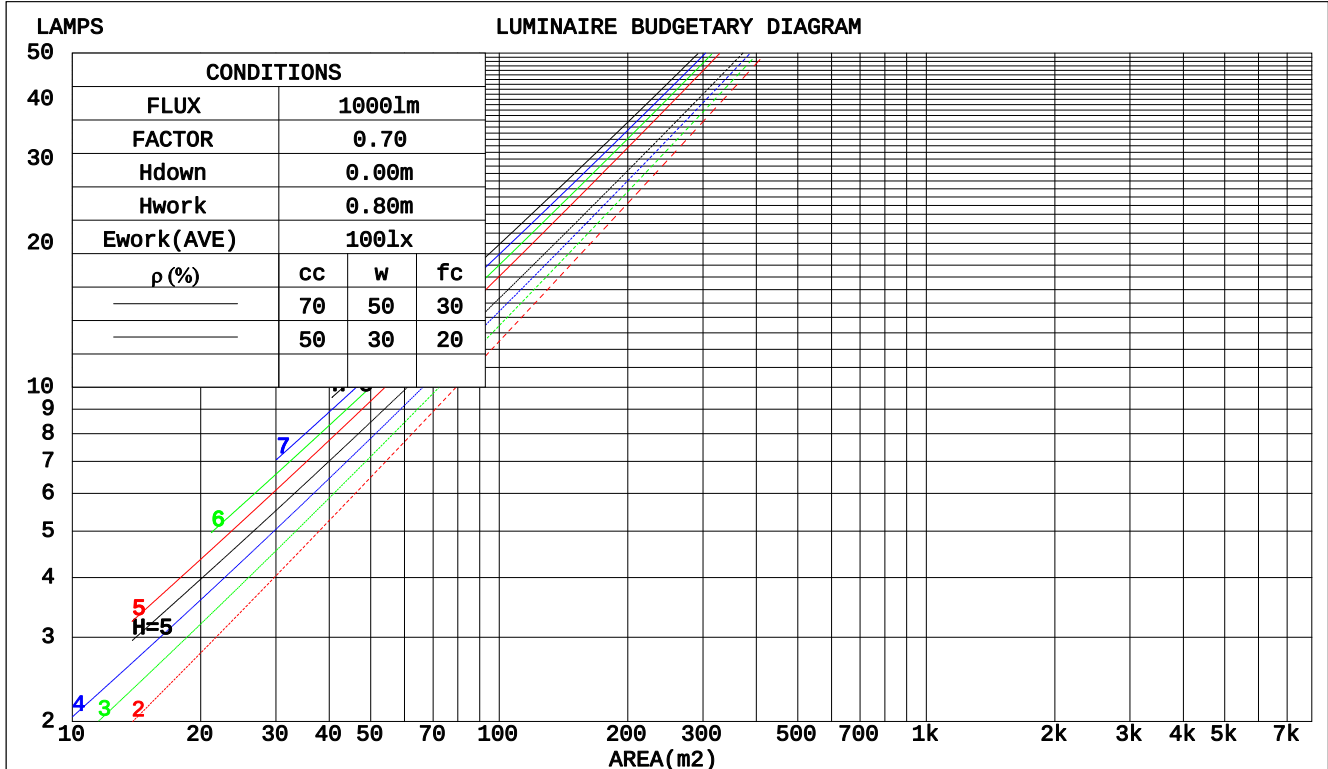
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	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	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.04	1.01	.98	1.03	.99	.97	.90	.97	.94	.97	.94	.92	.94	.92	.90	.89
3.0	.98	.94	.90	.97	.93	.89	.94	.91	.88	.92	.89	.87	.90	.87	.85	.84
4.0	.93	.88	.84	.92	.87	.84	.90	.86	.83	.88	.85	.82	.86	.83	.81	.79
5.0	.88	.83	.79	.87	.82	.79	.86	.81	.78	.84	.80	.77	.82	.79	.77	.75
6.0	.84	.79	.75	.83	.78	.75	.82	.77	.74	.80	.77	.74	.79	.76	.73	.72
7.0	.80	.75	.71	.80	.75	.71	.78	.74	.71	.77	.73	.70	.76	.73	.70	.69
8.0	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.67	.73	.70	.67	.66
9.0	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.71	.67	.64	.63
10.0	.71	.66	.63	.70	.66	.62	.70	.65	.62	.69	.65	.62	.68	.65	.62	.61



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-18

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:230.59V I:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm					
NAME: DL2503-WHTC20C02			TYPE:		WEIGHT:
SPEC.: white RA90 3000K+5700K			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	.167	.095	.030	.160	.091	.029	.147	.085	.027	.136	.078	.025	.125	.073	.023	
2.0	.158	.086	.026	.152	.084	.026	.141	.079	.024	.132	.074	.023	.123	.069	.022	
3.0	.148	.079	.024	.144	.077	.023	.135	.073	.022	.127	.069	.021	.119	.066	.020	
4.0	.140	.073	.021	.136	.071	.021	.128	.068	.020	.121	.065	.020	.115	.062	.019	
5.0	.132	.067	.020	.129	.066	.019	.122	.064	.019	.116	.061	.018	.110	.059	.018	
6.0	.125	.063	.018	.122	.062	.018	.116	.060	.017	.111	.058	.017	.106	.056	.017	
7.0	.119	.059	.017	.116	.058	.016	.111	.056	.016	.106	.055	.016	.102	.053	.016	
8.0	.113	.055	.016	.111	.054	.015	.106	.053	.015	.102	.052	.015	.098	.050	.015	
9.0	.108	.052	.015	.106	.051	.014	.102	.050	.014	.098	.049	.014	.094	.048	.014	
10.0	.103	.049	.014	.101	.049	.014	.097	.048	.013	.094	.047	.013	.091	.046	.013	

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	.170	.157	.146	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.112	.077	.052	.096	.067	.045	.067	.047	.032	.039	.027	.019	.012	.009	.006	
7.0	.105	.069	.044	.090	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.085	.054	.033	.059	.038	.023	.034	.023	.014	.011	.007	.005	
9.0	.093	.057	.033	.081	.050	.029	.056	.035	.020	.032	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.076	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm											
NAME: DL2503-WHTC20C02					TYPE:			WEIGHT:			
SPEC.: white RA90 3000K+5700K					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		18.4	19.2	18.6	19.4	19.5	18.3	19.2	18.6	19.3	19.5
	3H	18.3	19.1	18.6	19.3	19.5	18.3	19.1	18.6	19.3	19.5
	4H	18.4	19.1	18.6	19.3	19.5	18.3	19.1	18.6	19.3	19.5
	6H	18.4	19.1	18.7	19.4	19.6	18.4	19.1	18.7	19.3	19.5
	8H	18.4	19.1	18.7	19.3	19.6	18.3	19.0	18.7	19.3	19.5
	12H	18.4	19.0	18.7	19.3	19.6	18.3	19.0	18.6	19.2	19.5
4H	2H	18.2	18.9	18.4	19.1	19.3	18.2	18.9	18.4	19.1	19.3
	3H	18.2	18.8	18.5	19.1	19.4	18.2	18.8	18.5	19.1	19.4
	4H	18.3	18.9	18.7	19.2	19.5	18.3	18.8	18.6	19.1	19.4
	6H	18.4	19.0	18.8	19.3	19.6	18.3	18.9	18.7	19.2	19.5
	8H	18.4	18.9	18.8	19.3	19.6	18.3	18.8	18.7	19.2	19.5
	12H	18.4	18.9	18.8	19.2	19.6	18.3	18.8	18.7	19.1	19.5
8H	4H	18.3	18.8	18.7	19.1	19.5	18.2	18.7	18.6	19.1	19.4
	6H	18.5	18.9	18.9	19.3	19.7	18.4	18.8	18.8	19.1	19.6
	8H	18.5	18.8	18.9	19.2	19.7	18.4	18.7	18.8	19.1	19.6
	12H	18.5	18.8	18.9	19.2	19.7	18.3	18.6	18.8	19.1	19.6
12H	4H	18.2	18.7	18.6	19.1	19.4	18.2	18.6	18.6	19.0	19.4
	6H	18.4	18.8	18.9	19.2	19.6	18.3	18.7	18.8	19.1	19.5
	8H	18.5	18.8	18.9	19.2	19.7	18.3	18.6	18.8	19.1	19.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 2.5 / - 4.4					+ 2.2 / - 4.7					
1.5H	+ 2.6 / - 4.4					+ 2.9 / - 4.9					
2.0H	+ 4.9 / - 3.3					+ 5.7 / - 3.3					

CIE Pub.117, 1895 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.2$)
Area: 0.00567 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

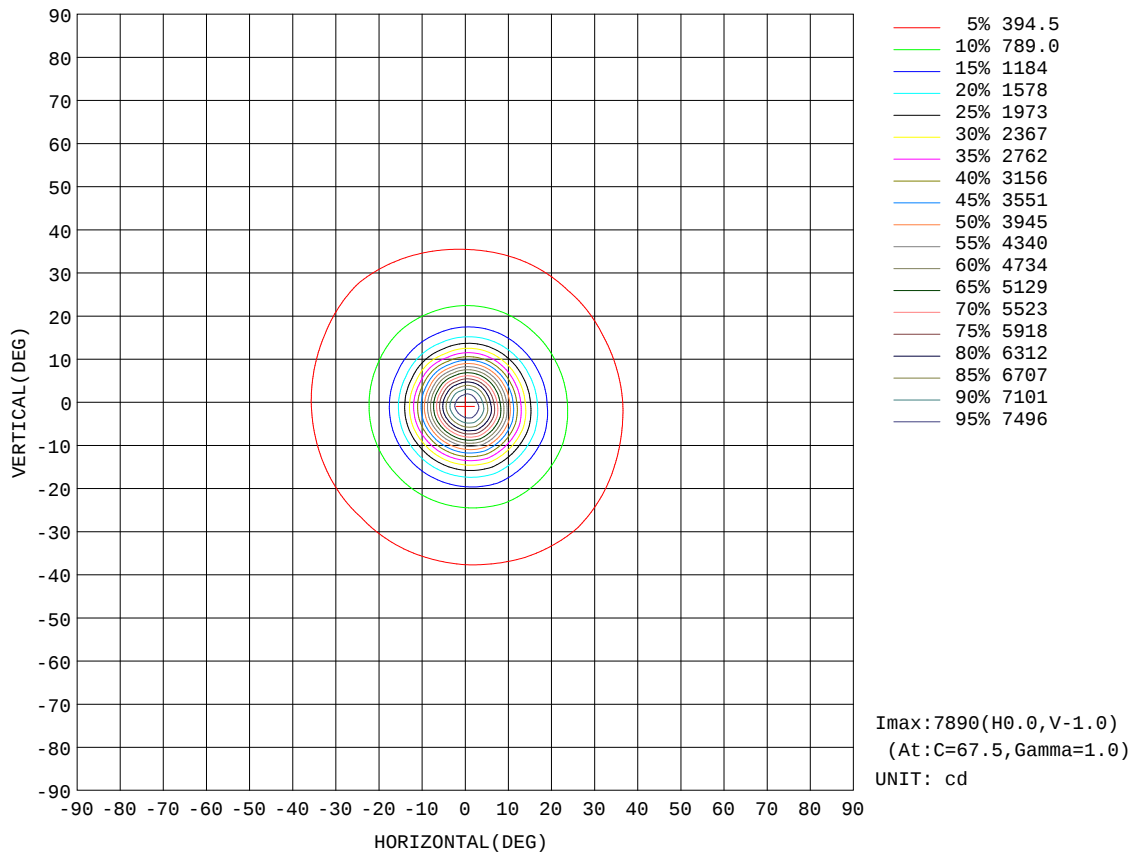
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	78	74	84	78	74	83	77	73	70
0.80	92	86	82	92	86	82	91	85	82	78
1.00	97	91	87	97	91	87	95	91	87	83
1.25	102	96	92	101	96	92	99	94	91	87
1.50	105	100	96	103	99	95	101	97	94	90
2.00	108	103	100	106	102	99	103	100	98	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	108	105	104	97
5.00	115	112	110	112	110	108	108	107	105	98
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:2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

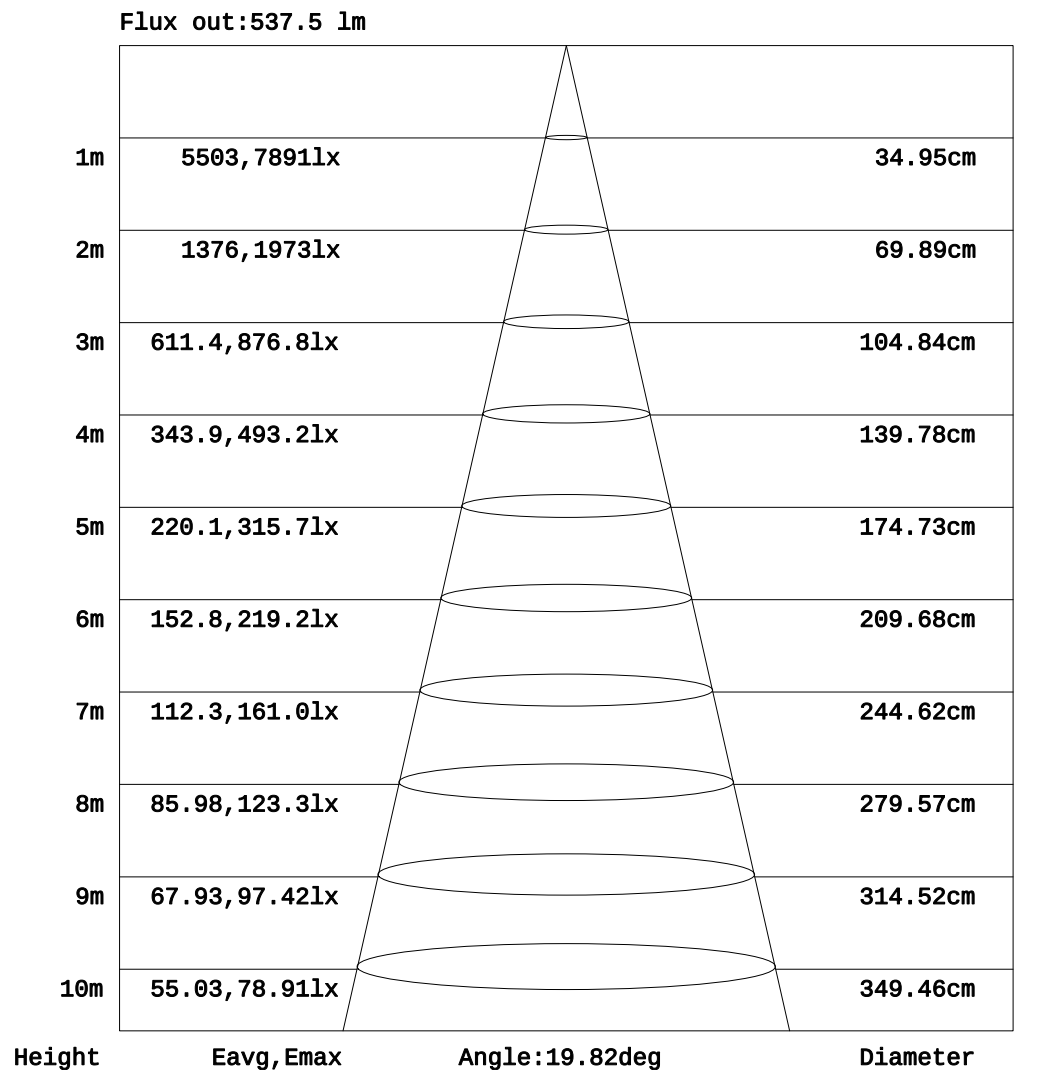


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



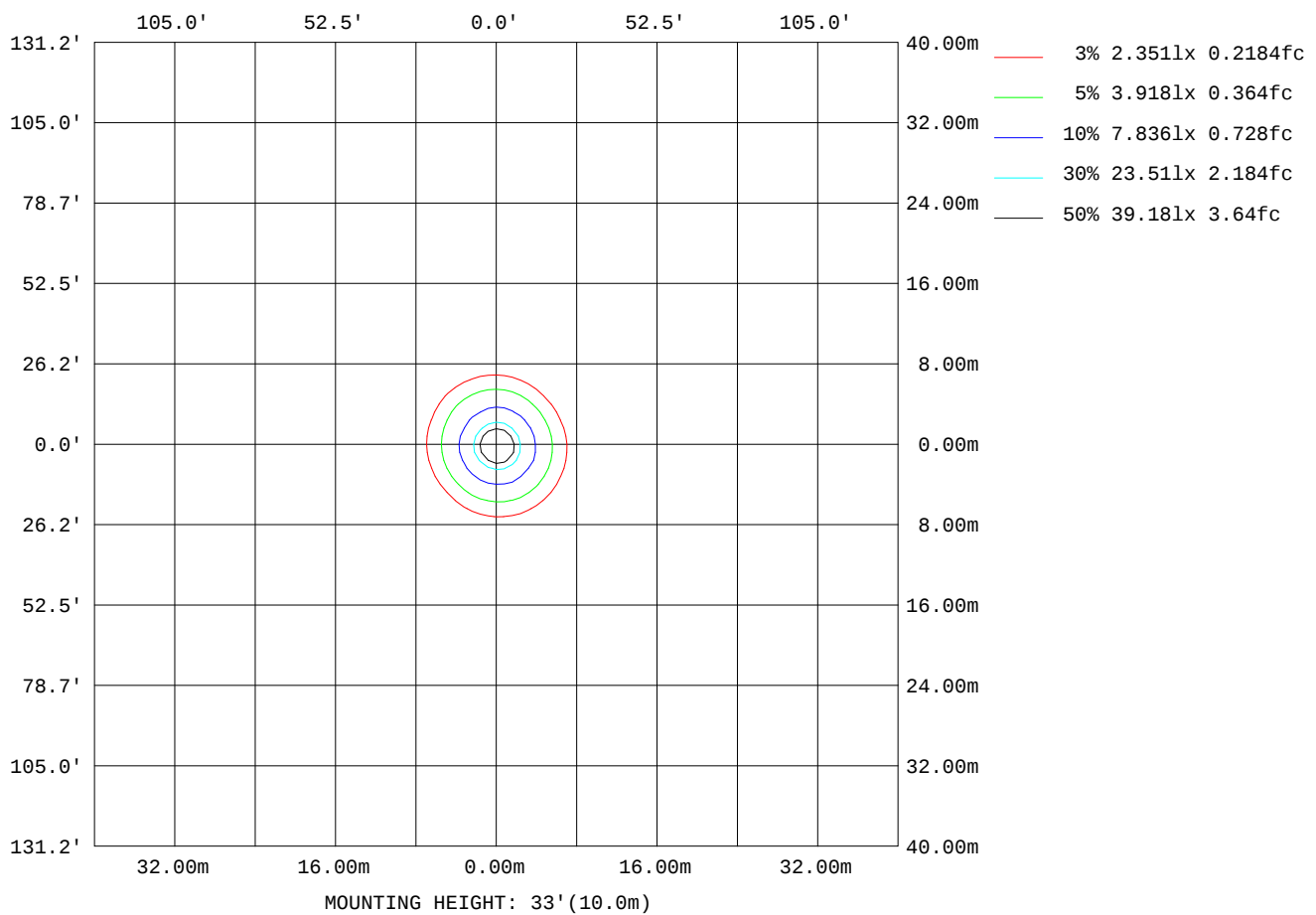
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-18

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:0.0960A P:20.193W PF:0.9120 Freq:49.99Hz Lamp Flux:1895.4x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

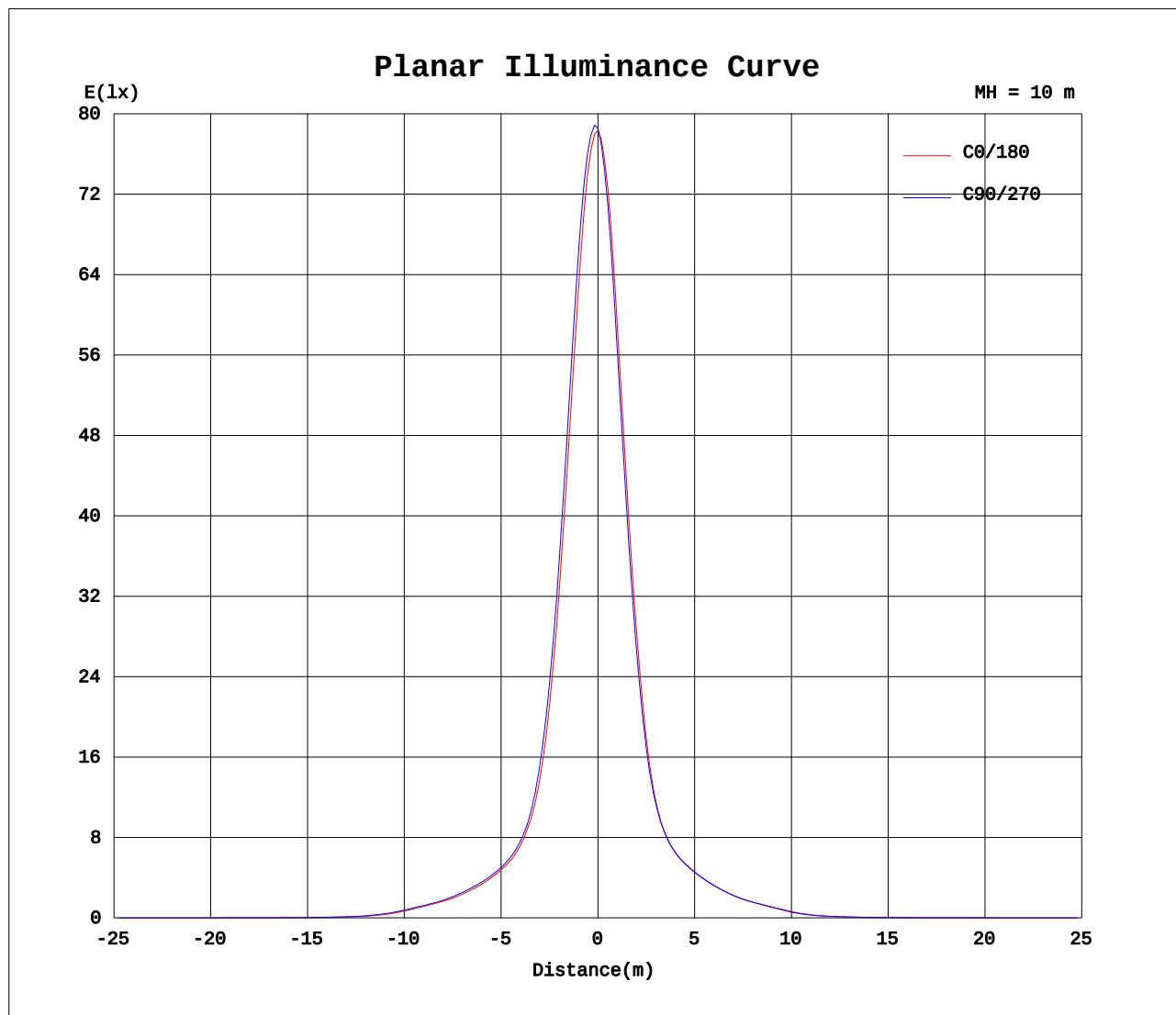
AvgL	cd/m2
L_0~180(65)av	6388
L_0~180(75)av	8877
L_0~180(85)av	3993
L_90~270(65)av	6402
L_90~270(75)av	8596
L_90~270(85)av	4395
L_45(65)av	6200
L_45(75)av	8278
L_45(85)av	4377

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-04-18

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: 2024-04-18

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:

```