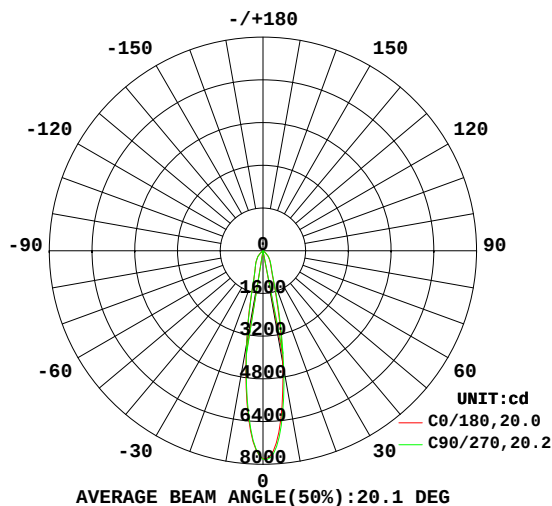


LUMINAIRE PHOTOMETRIC TEST REPORT

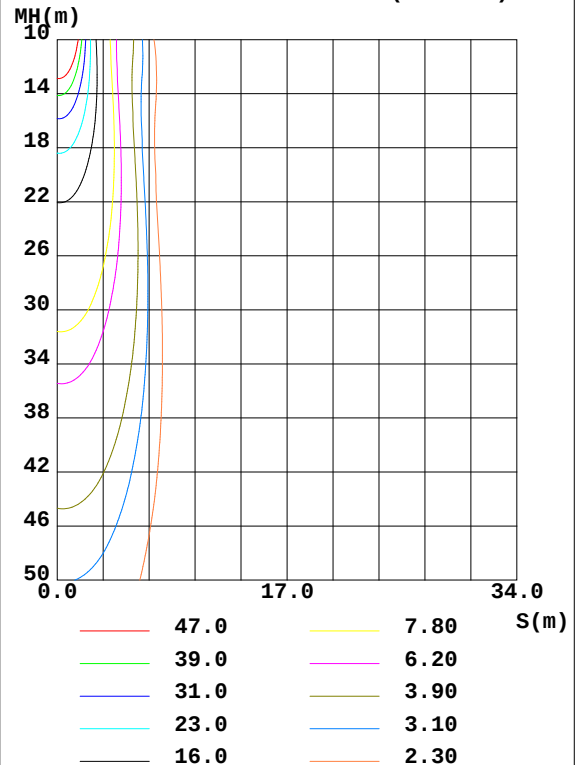
Test:U:230.59V I:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 101.74 lm/W			
MODEL	ML25141209 4000K	I _{max} (cd)	7844	S/MH(C0/180)	0.32
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.32
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	1925.3	η UP, DN(C0-180)	0.0, 53.3
NOMINAL FLUX(lm)	1925.31	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 46.7
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:

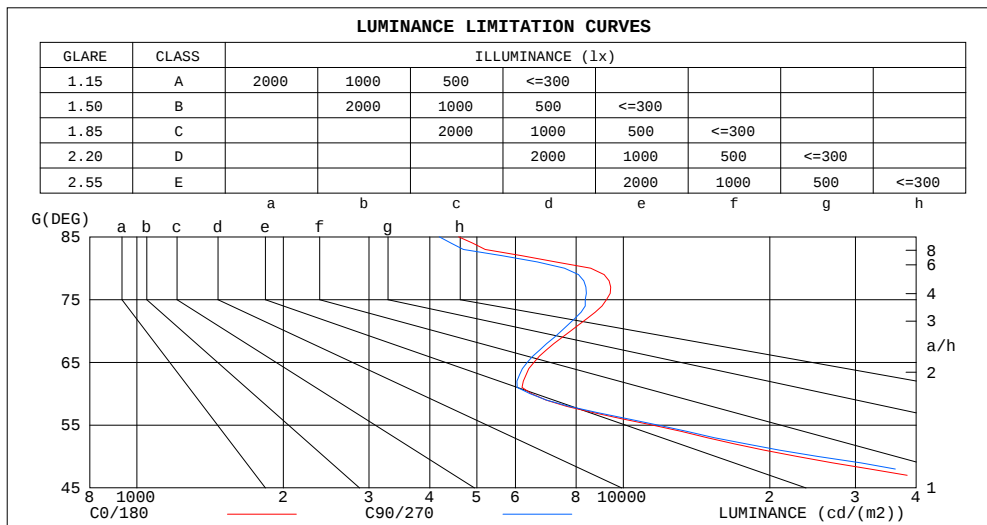
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	4257	4589	4471	3995	3571	3405	3486	3810	0- 10	539.5	539.5	28,28
20	1114	1194	1142	1002	929.8	917.6	940.7	982.3	10- 20	556.9	1096	56.9,56.9
30	574.2	600.3	596.6	557.4	539.6	543.7	544.7	543.4	20- 30	339.1	1435	74.6,74.6
40	338.6	348.6	352.9	331.0	319.2	319.5	319.0	320.6	30- 40	270.5	1706	88.6,88.6
50	82.86	90.50	91.35	85.37	71.85	65.70	68.07	75.23	40- 50	153.1	1859	96.6,96.6
60	18.36	18.76	18.22	17.61	17.57	17.97	18.14	17.41	50- 60	34.12	1893	98.3,98.3
70	15.12	13.90	14.47	14.14	15.74	15.72	16.45	14.88	60- 70	15.94	1909	99.2,99.2
80	8.439	7.601	7.449	7.900	7.203	6.607	7.248	7.948	70- 80	13.23	1922	99.8,99.8
90	0.2239	0.1892	0.1930	0.2046	0.2664	0.6794	0.8068	0.4246	80- 90	2.916	1925	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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4586	4185
80	8571	7566
75	9233	8348
70	7796	7460
65	6551	6348
60	6475	6428
55	11467	11772
50	22736	25065
45	53740	57534

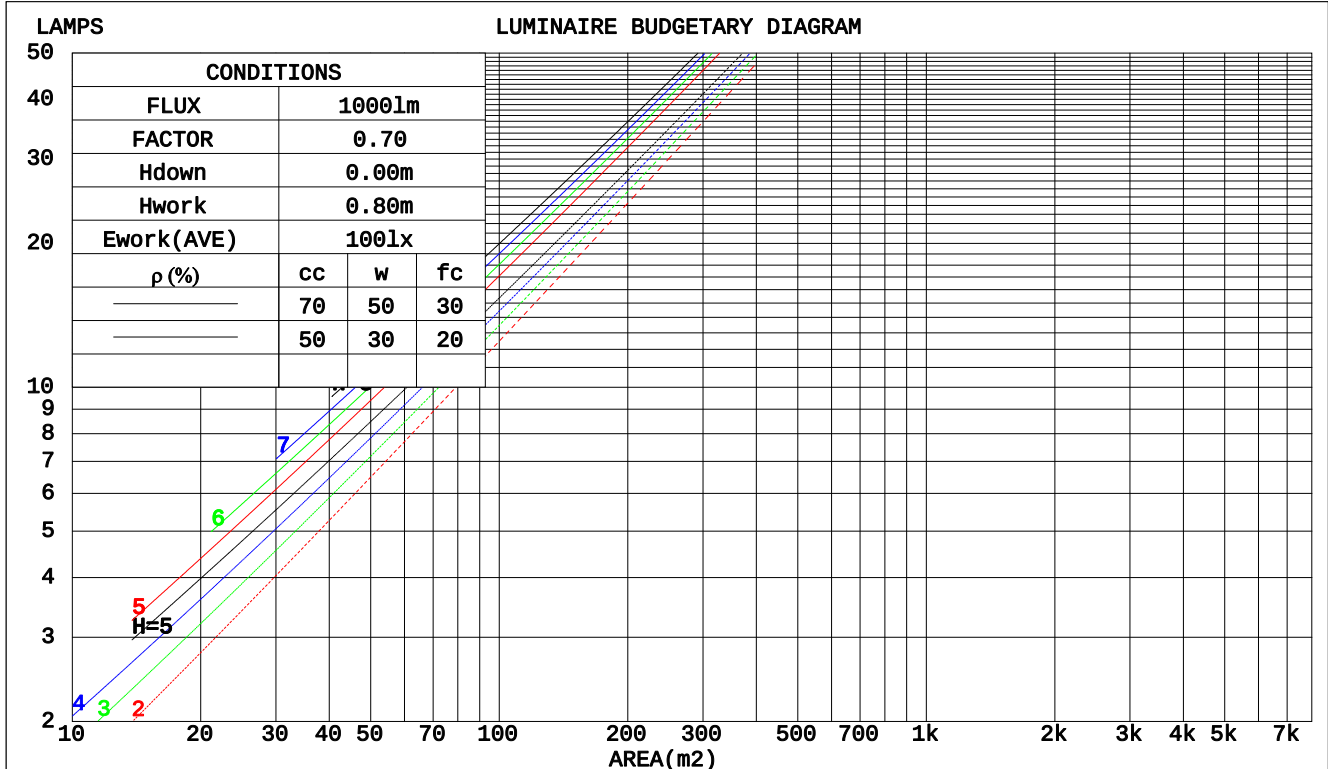
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-18

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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 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	.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.04	1.01	.97	1.03	.99	.96	.99	.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	.84	.82	.86	.83	.81	.79
5.0	.88	.83	.79	.87	.82	.79	.85	.81	.78	.84	.80	.77	.82	.79	.77	.75
6.0	.84	.78	.75	.83	.78	.74	.82	.77	.74	.80	.76	.73	.79	.76	.73	.72
7.0	.80	.75	.71	.79	.74	.71	.78	.74	.70	.77	.73	.70	.76	.72	.70	.68
8.0	.76	.71	.68	.76	.71	.68	.75	.70	.67	.74	.70	.67	.73	.69	.67	.66
9.0	.73	.68	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.70	.67	.64	.63
10.0	.71	.66	.62	.70	.65	.62	.69	.65	.62	.69	.65	.62	.68	.64	.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
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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 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	.161	.092	.029	.148	.085	.027	.137	.079	.025	.126	.073	.024		
2.0	.158	.087	.027	.153	.084	.026	.142	.079	.025	.133	.074	.023	.124	.070	.022		
3.0	.149	.079	.024	.144	.077	.023	.135	.073	.022	.127	.070	.021	.120	.066	.020		
4.0	.141	.073	.021	.137	.071	.021	.129	.068	.020	.122	.065	.020	.115	.063	.019		
5.0	.133	.068	.020	.129	.066	.019	.123	.064	.019	.117	.062	.018	.111	.059	.018		
6.0	.126	.063	.018	.123	.062	.018	.117	.060	.017	.112	.058	.017	.107	.056	.017		
7.0	.119	.059	.017	.117	.058	.017	.112	.056	.016	.107	.055	.016	.102	.053	.016		
8.0	.114	.055	.016	.111	.055	.015	.107	.053	.015	.103	.052	.015	.099	.051	.015		
9.0	.108	.052	.015	.106	.052	.015	.102	.050	.014	.098	.049	.014	.095	.048	.014		
10.0	.103	.050	.014	.101	.049	.014	.098	.048	.014	.095	.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	.091	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.074	.112	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.121	.087	.062	.104	.075	.054	.071	.052	.038	.041	.031	.022	.013	.010	.007	
6.0	.112	.077	.052	.097	.067	.045	.067	.047	.032	.039	.028	.019	.012	.009	.006	
7.0	.105	.069	.044	.091	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.085	.055	.033	.059	.038	.023	.034	.023	.014	.011	.007	.005	
9.0	.094	.057	.033	.081	.050	.029	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.077	.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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 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		18.3	19.1	18.5	19.3	19.5	18.1	19.0	18.4	19.2	19.3
	3H	18.3	19.1	18.5	19.3	19.5	18.1	18.9	18.4	19.1	19.3
	4H	18.3	19.1	18.6	19.3	19.5	18.2	18.9	18.4	19.1	19.3
	6H	18.4	19.1	18.7	19.3	19.6	18.2	18.9	18.5	19.1	19.4
	8H	18.4	19.1	18.7	19.3	19.6	18.2	18.9	18.5	19.1	19.4
	12H	18.4	19.0	18.7	19.3	19.6	18.2	18.8	18.5	19.1	19.3
4H	2H	18.1	18.9	18.4	19.1	19.3	18.0	18.7	18.2	18.9	19.1
	3H	18.2	18.8	18.5	19.1	19.3	18.0	18.7	18.3	18.9	19.2
	4H	18.3	18.9	18.6	19.2	19.5	18.1	18.7	18.4	19.0	19.3
	6H	18.4	19.0	18.8	19.3	19.6	18.2	18.7	18.6	19.1	19.4
	8H	18.4	18.9	18.8	19.3	19.6	18.2	18.7	18.6	19.0	19.4
	12H	18.4	18.9	18.8	19.2	19.6	18.2	18.6	18.6	19.0	19.4
8H	4H	18.2	18.7	18.6	19.1	19.4	18.1	18.6	18.5	18.9	19.3
	6H	18.5	18.9	18.9	19.2	19.7	18.2	18.6	18.7	19.0	19.4
	8H	18.5	18.8	18.9	19.2	19.7	18.2	18.6	18.7	19.0	19.4
	12H	18.5	18.8	18.9	19.2	19.7	18.2	18.5	18.7	19.0	19.4
12H	4H	18.2	18.7	18.6	19.0	19.4	18.0	18.5	18.4	18.8	19.2
	6H	18.4	18.8	18.9	19.2	19.6	18.2	18.6	18.6	19.0	19.4
	8H	18.5	18.8	18.9	19.2	19.7	18.2	18.5	18.7	19.0	19.4
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 2.3 / - 4.1					+ 2.0 / - 4.5					
1.5H	+ 2.5 / - 4.2					+ 3.0 / - 4.8					
2.0H	+ 5.0 / - 3.2					+ 5.9 / - 3.2					

CIE Pub.117, 1925 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.3$)
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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

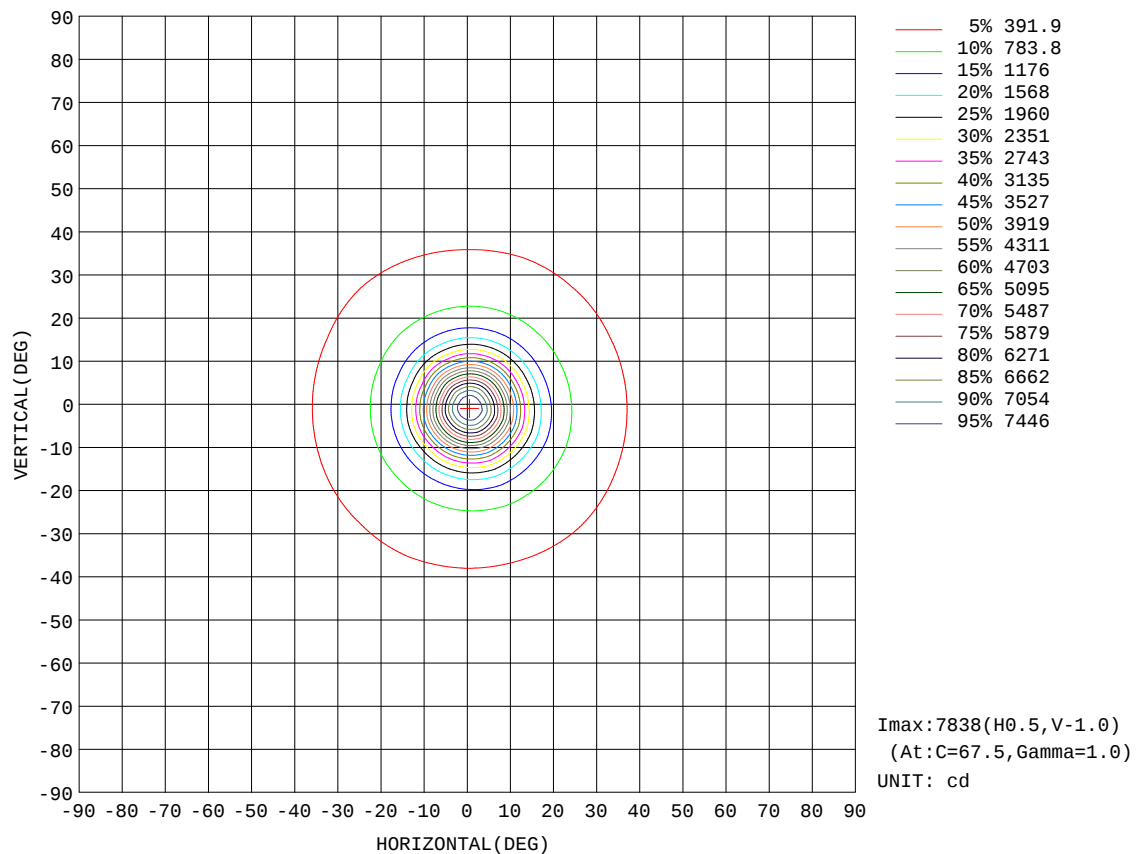
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	78	73	84	77	73	83	77	73	69
0.80	92	86	82	92	86	82	90	85	81	77
1.00	97	91	87	96	91	87	95	91	86	82
1.25	102	96	92	101	95	92	99	94	91	87
1.50	105	99	96	103	99	95	101	97	94	90
2.00	108	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	107	105	104	96
5.00	114	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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

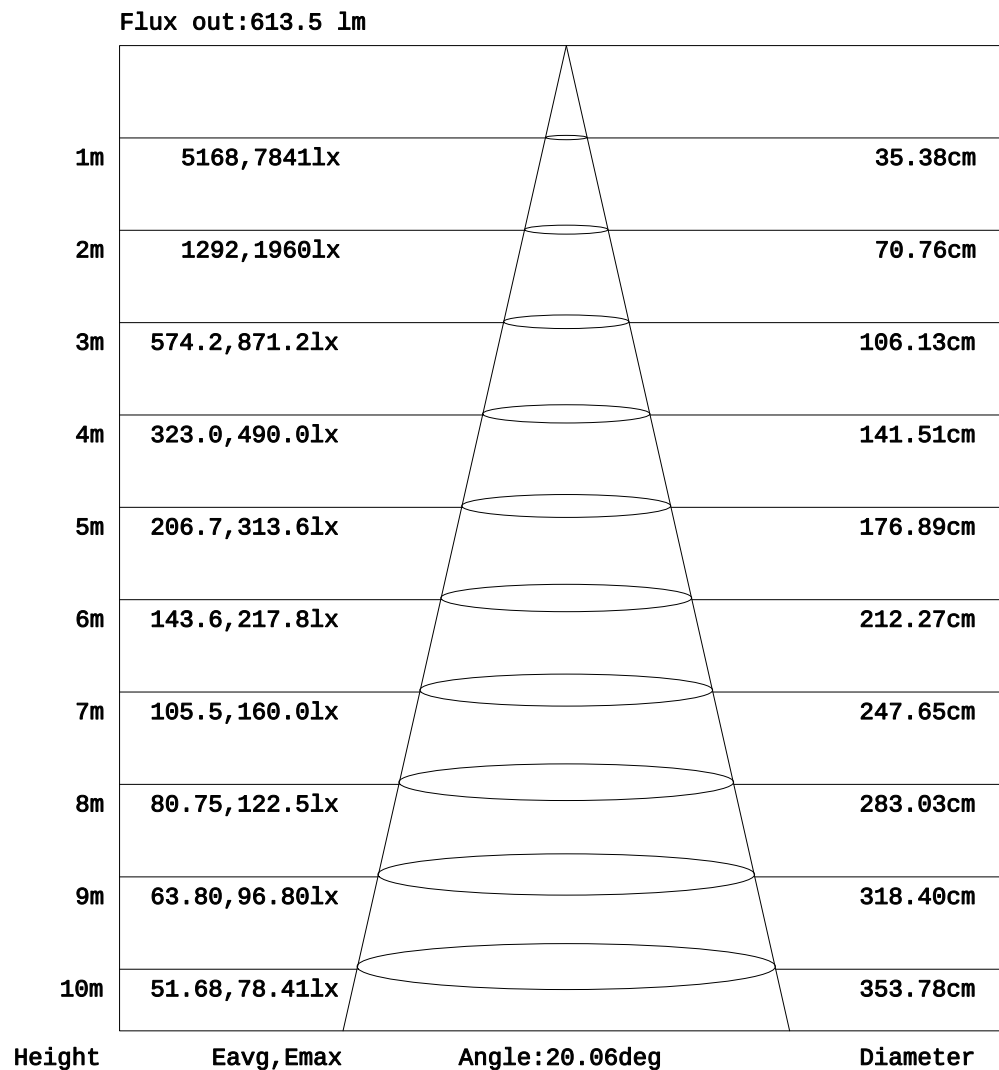


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-04-18

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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:



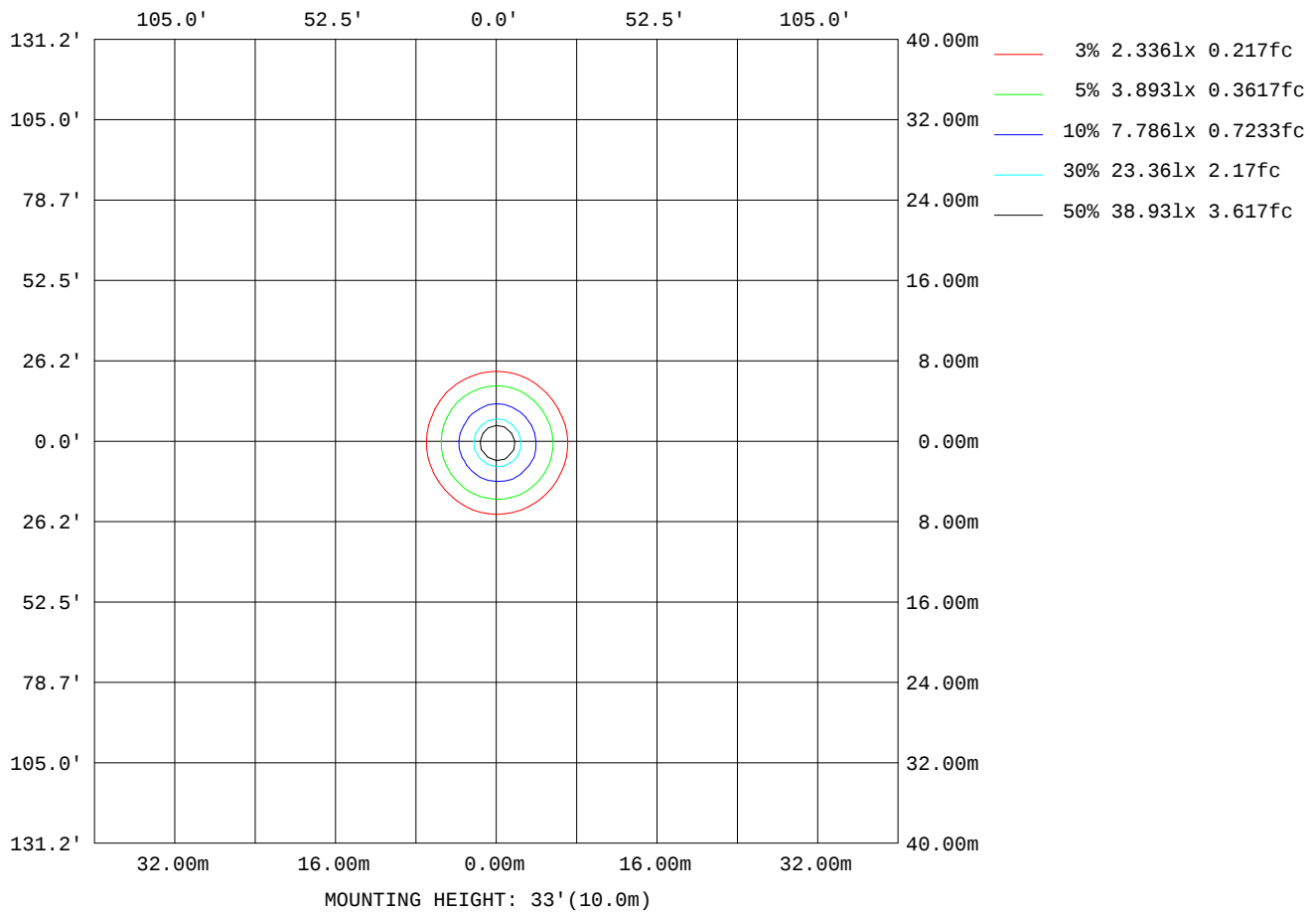
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 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:0.0911A P:18.924W PF:0.9010 Freq:49.99Hz Lamp Flux:1925.31x1 lm		
NAME: DL2503-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 85mm	Shielding Angle:

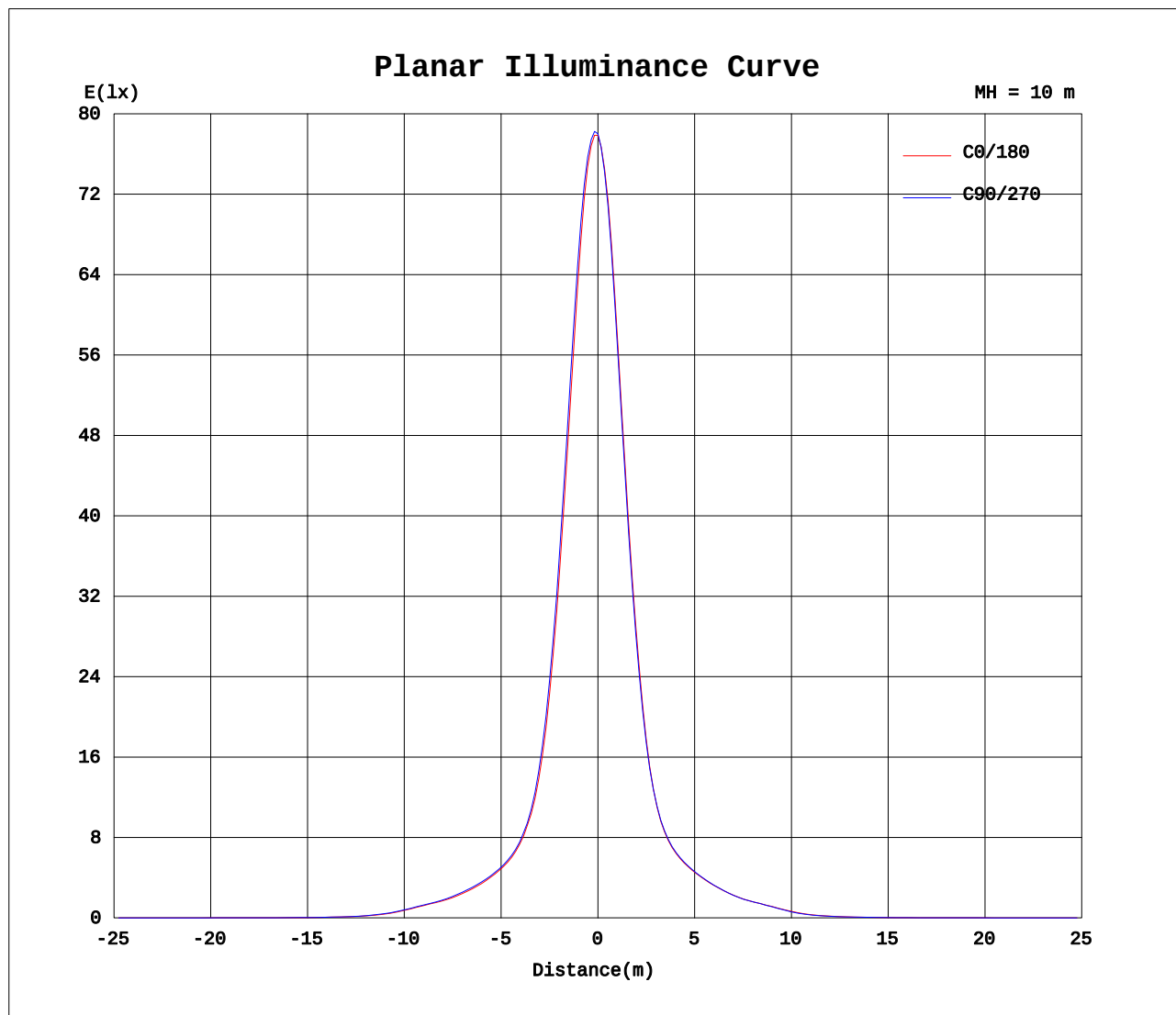
AvgL	cd/m2
L_0~180(65)av	6684
L_0~180(75)av	9280
L_0~180(85)av	4282
L_90~270(65)av	6691
L_90~270(75)av	9008
L_90~270(85)av	4645
L_45(65)av	6485
L_45(75)av	8686
L_45(85)av	4627

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:

```