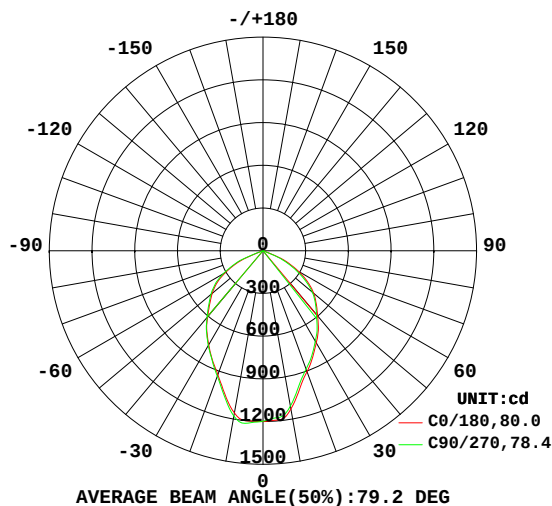


LUMINAIRE PHOTOMETRIC TEST REPORT

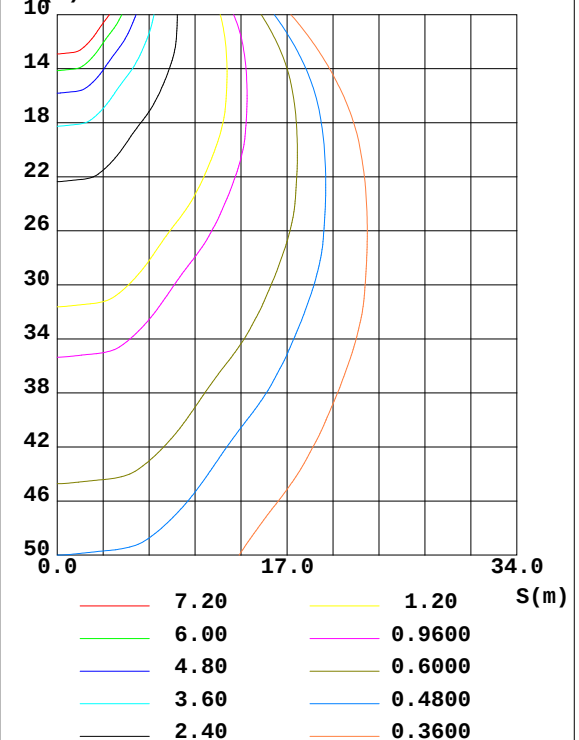
Test:U:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 111.37 lm/W			
MODEL	TB25141209 4000K	I _{max} (cd)	1219	S/MH(C0/180)	0.98
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.98
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2144.7	η UP, DN(C0-180)	0.0, 48.7
NOMINAL FLUX(lm)	2144.68	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.15

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: 2024-05-28

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:

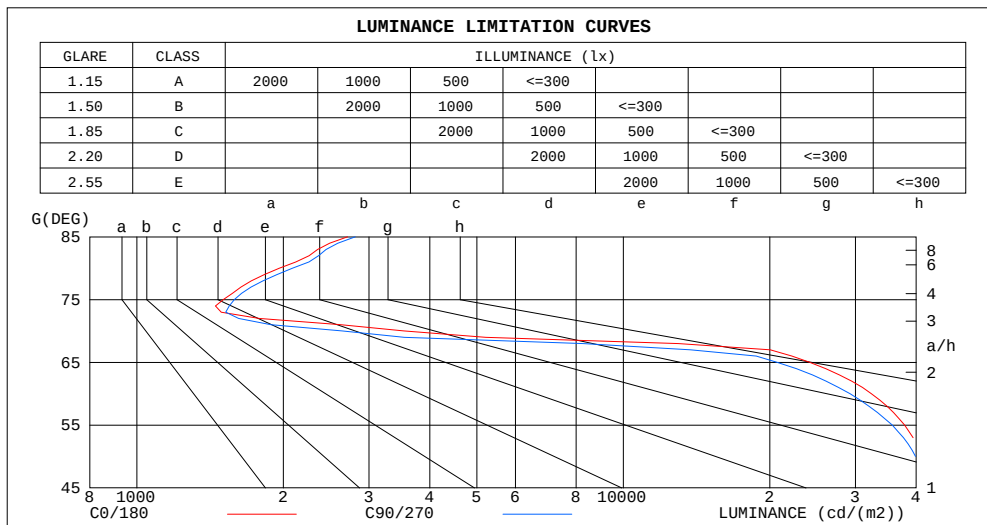
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1129	1107	1108	1127	1158	1170	1179	1169	0- 10	112.8	112.8	5.26, 5.26
20	904.4	890.1	886.0	904.2	927.4	931.1	938.6	933.0	10- 20	286.3	399.1	18.6, 18.6
30	748.2	740.3	734.5	745.8	762.7	765.8	768.8	767.3	20- 30	383.3	782.3	36.5, 36.5
40	597.5	590.8	585.8	590.4	603.9	607.0	611.2	610.2	30- 40	424.4	1207	56.3, 56.3
50	465.7	456.5	452.9	458.1	465.1	471.7	476.8	474.6	40- 50	409.6	1616	75.4, 75.4
60	285.8	268.8	258.3	275.4	302.5	318.7	320.7	313.7	50- 60	344.5	1961	91.4, 91.4
70	21.41	18.41	15.98	16.40	20.97	25.44	27.79	24.62	60- 70	171.3	2132	99.4, 99.4
80	6.024	6.510	6.410	5.827	4.805	4.400	4.453	4.955	70- 80	8.657	2141	99.8, 99.8
90	0.9265	0.9458	0.9535	0.9458	0.4324	0.4169	0.4208	0.4825	80- 90	3.827	2145	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: 2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2711	2811
80	1963	2089
75	1506	1586
70	3542	2644
65	24154	20692
60	32353	29238
55	37851	35703
50	41000	39871
45	42380	41668

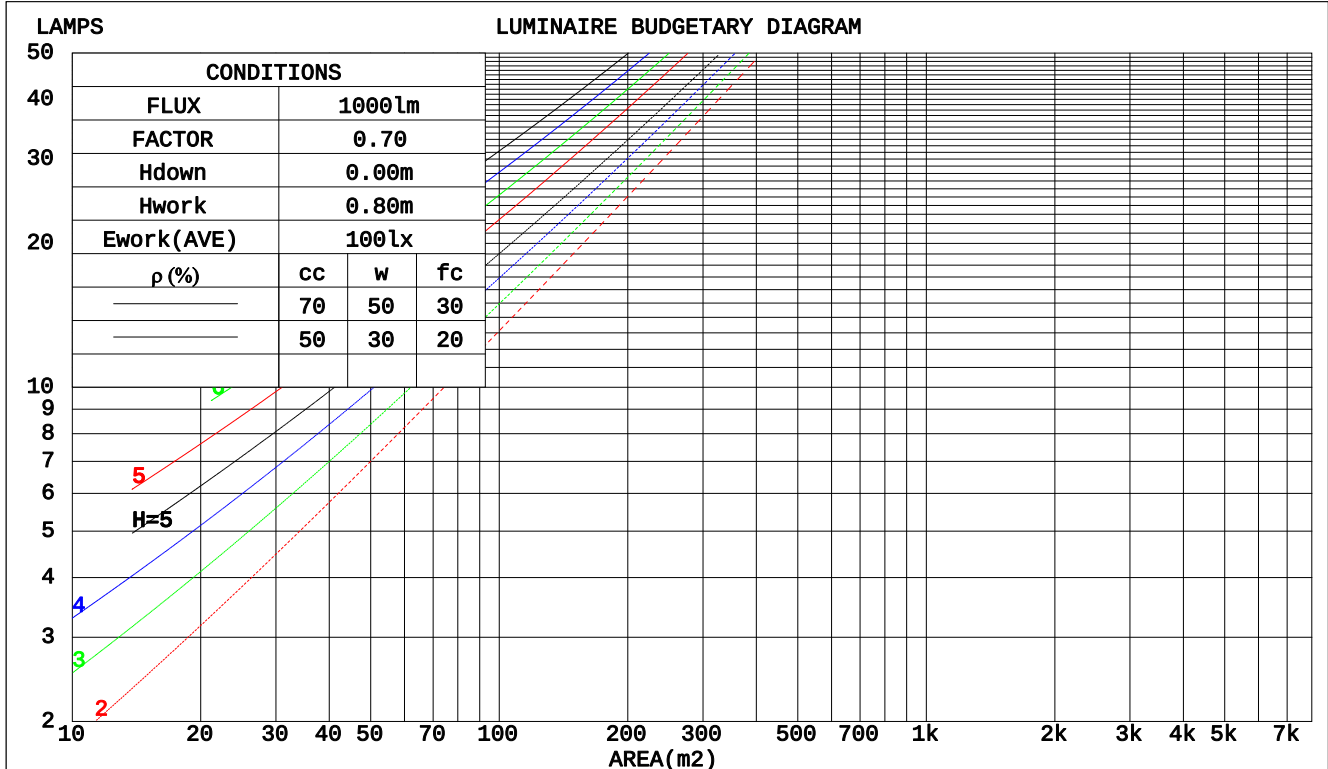
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.99	.96	.97	.95	.93	.94	.92	.91	.89
2.0	.96	.90	.86	.94	.89	.85	.91	.86	.83	.88	.84	.81	.85	.82	.79	.77
3.0	.86	.79	.73	.84	.78	.73	.81	.76	.71	.79	.74	.70	.76	.72	.69	.67
4.0	.77	.69	.64	.76	.69	.63	.73	.67	.62	.71	.66	.61	.69	.65	.61	.59
5.0	.70	.62	.56	.69	.61	.55	.66	.60	.55	.65	.59	.54	.63	.58	.54	.52
6.0	.63	.55	.49	.62	.55	.49	.61	.54	.49	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.50	.44	.57	.49	.44	.55	.49	.44	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.40	.51	.44	.39	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.42	.37	.33	.31



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm					
NAME: DL2005-WHTC20C02			TYPE:		WEIGHT:
SPEC.: white RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 150mm		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	.243	.138	.044	.236	.134	.043	.223	.128	.041	.211	.122	.039	.200	.116	.037	
2.0	.239	.131	.040	.233	.128	.040	.222	.123	.038	.211	.119	.037	.202	.114	.036	
3.0	.229	.122	.036	.223	.120	.036	.214	.116	.035	.204	.112	.034	.196	.109	.034	
4.0	.216	.112	.033	.212	.111	.033	.203	.108	.032	.195	.105	.032	.187	.102	.031	
5.0	.204	.104	.030	.200	.103	.030	.192	.100	.029	.185	.098	.029	.178	.095	.029	
6.0	.192	.096	.028	.188	.095	.027	.181	.093	.027	.175	.091	.027	.169	.089	.026	
7.0	.181	.089	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025	.160	.083	.024	
8.0	.170	.083	.023	.167	.082	.023	.162	.081	.023	.157	.079	.023	.152	.078	.023	
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.021	.149	.075	.021	.144	.073	.021	
10.0	.152	.073	.020	.150	.072	.020	.145	.071	.020	.141	.070	.020	.137	.069	.020	

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	.176	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.165	.132	.104	.141	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012		
3.0	.157	.114	.080	.134	.098	.069	.092	.068	.049	.053	.040	.029	.017	.013	.009		
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.008		
5.0	.142	.090	.051	.122	.077	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005		
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004		
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003		
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm											
NAME: DL2005-WHTC20C02						TYPE:			WEIGHT:		
SPEC.: white RA90 3000K+5700K						DIM.:			SERIAL No.:		
MFR.:						SUR.: 150mm			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	2H	22.5	23.8	22.7	24.0	24.2	22.2	23.5	22.5	23.7	23.9
	3H	22.7	23.9	23.0	24.1	24.4	22.3	23.6	22.6	23.8	24.0
	4H	22.6	23.7	22.9	24.0	24.2	22.2	23.4	22.5	23.6	23.9
	6H	22.5	23.6	22.8	23.8	24.1	22.1	23.2	22.5	23.5	23.8
	8H	22.4	23.5	22.8	23.8	24.0	22.1	23.2	22.4	23.4	23.7
	12H	22.4	23.4	22.7	23.7	24.0	22.1	23.1	22.4	23.3	23.6
4H	2H	22.7	23.9	23.0	24.1	24.3	22.5	23.6	22.8	23.9	24.1
	3H	22.9	23.9	23.2	24.2	24.5	22.6	23.6	22.9	23.9	24.2
	4H	22.8	23.7	23.2	24.0	24.3	22.5	23.4	22.9	23.7	24.0
	6H	22.7	23.5	23.1	23.9	24.2	22.4	23.2	22.8	23.6	23.9
	8H	22.7	23.4	23.1	23.8	24.1	22.4	23.1	22.8	23.5	23.9
	12H	22.6	23.3	23.1	23.7	24.1	22.3	23.0	22.8	23.4	23.8
8H	4H	22.7	23.4	23.1	23.8	24.1	22.4	23.1	22.8	23.5	23.8
	6H	22.6	23.2	23.0	23.6	24.0	22.3	22.9	22.7	23.3	23.7
	8H	22.6	23.1	23.0	23.5	24.0	22.3	22.8	22.7	23.2	23.7
	12H	22.5	23.0	23.0	23.4	23.9	22.2	22.7	22.7	23.1	23.6
12H	4H	22.6	23.3	23.0	23.7	24.1	22.3	23.0	22.7	23.4	23.8
	6H	22.6	23.1	23.0	23.5	23.9	22.3	22.8	22.7	23.2	23.7
	8H	22.5	23.0	23.0	23.4	23.9	22.2	22.7	22.7	23.1	23.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.7 / - 0.9					+ 0.7 / - 0.9					
1.5H	+ 0.5 / - 0.6					+ 0.5 / - 0.7					
2.0H	+ 1.0 / - 1.2					+ 1.1 / - 1.2					

CIE Pub.117, 2145 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.7)
Area: 0.01767 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:

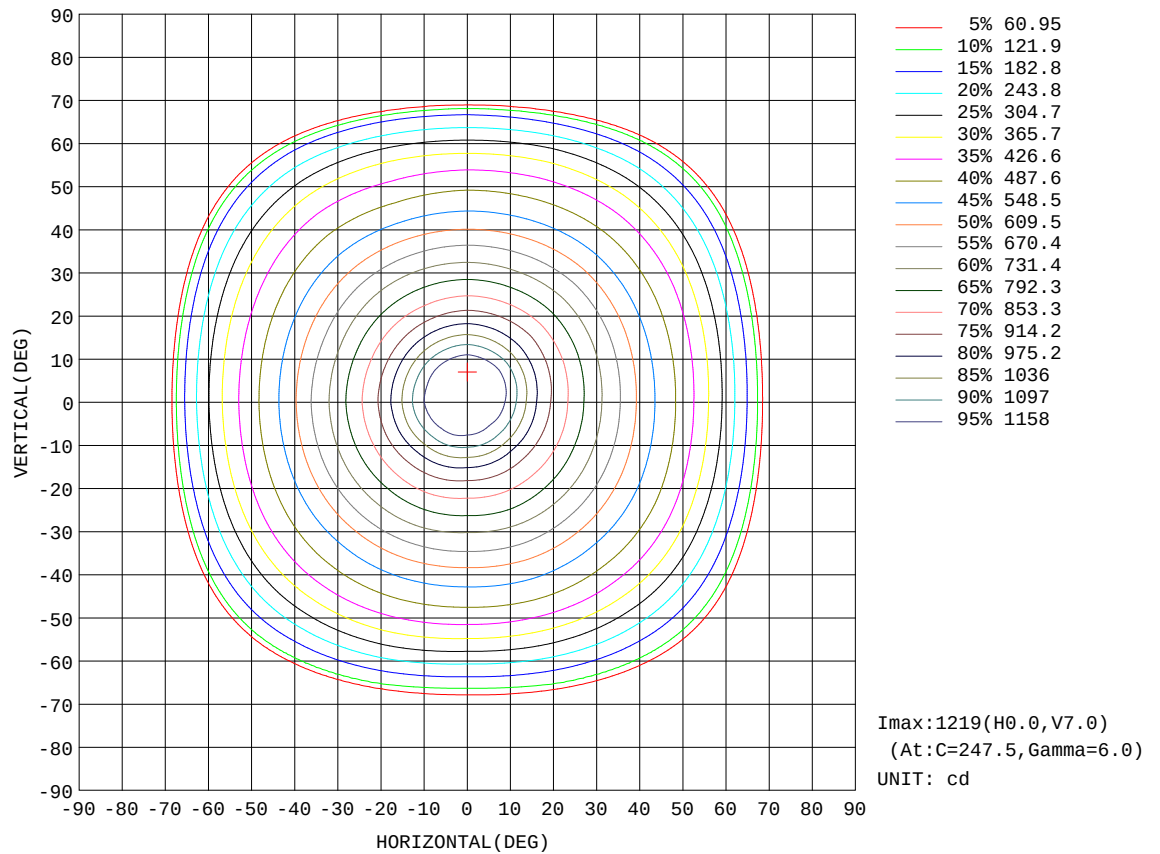
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	53	47	63	53	47	62	52	46	41
0.80	74	64	57	73	63	57	72	63	57	51
1.00	83	73	67	82	73	67	80	74	66	60
1.25	90	81	75	88	80	74	86	79	74	67
1.50	94	86	80	93	85	80	90	84	79	72
2.00	100	93	88	99	92	87	95	90	86	79
2.50	103	97	92	102	96	91	98	93	90	82
3.00	106	101	96	104	99	95	100	96	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	106	103	105	102	100	91
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:2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:

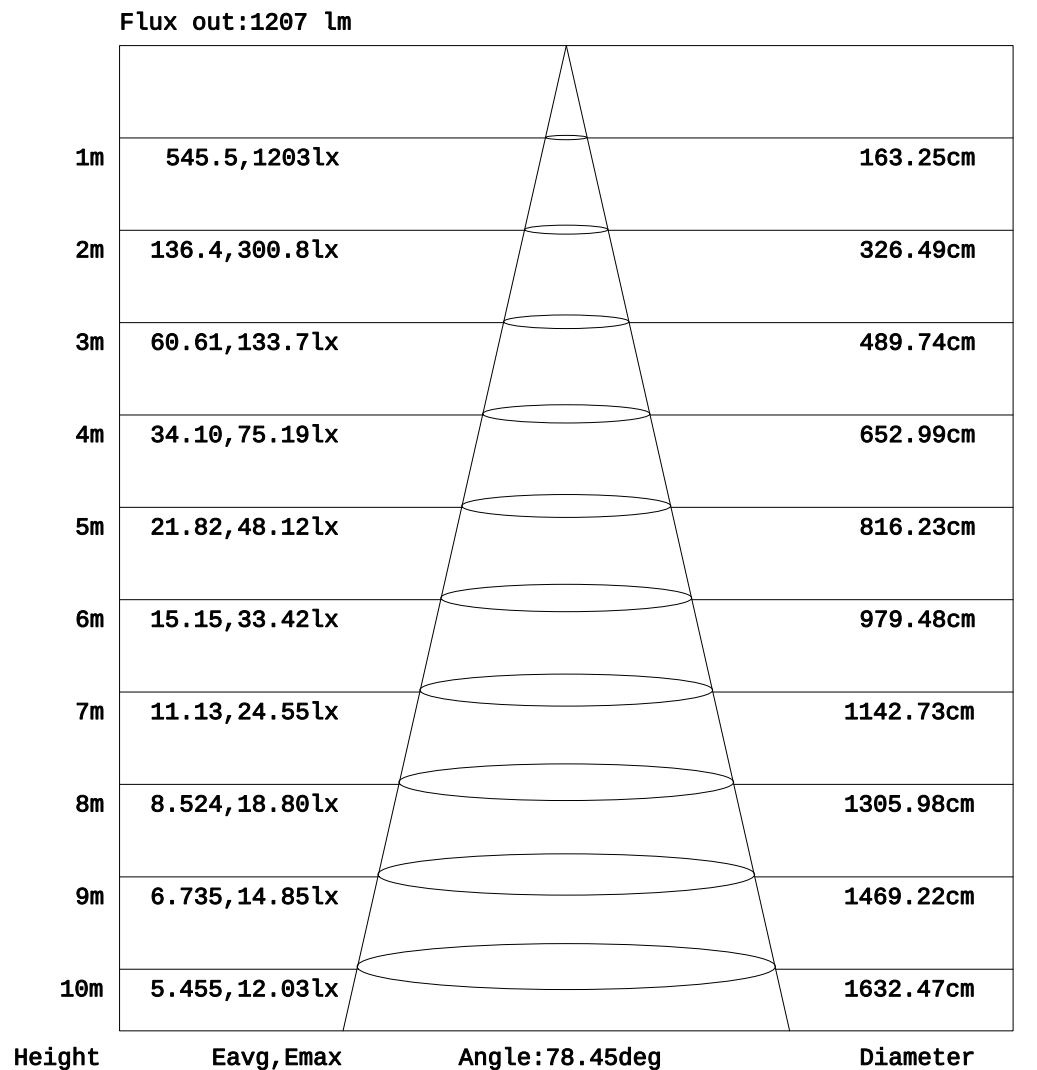


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:



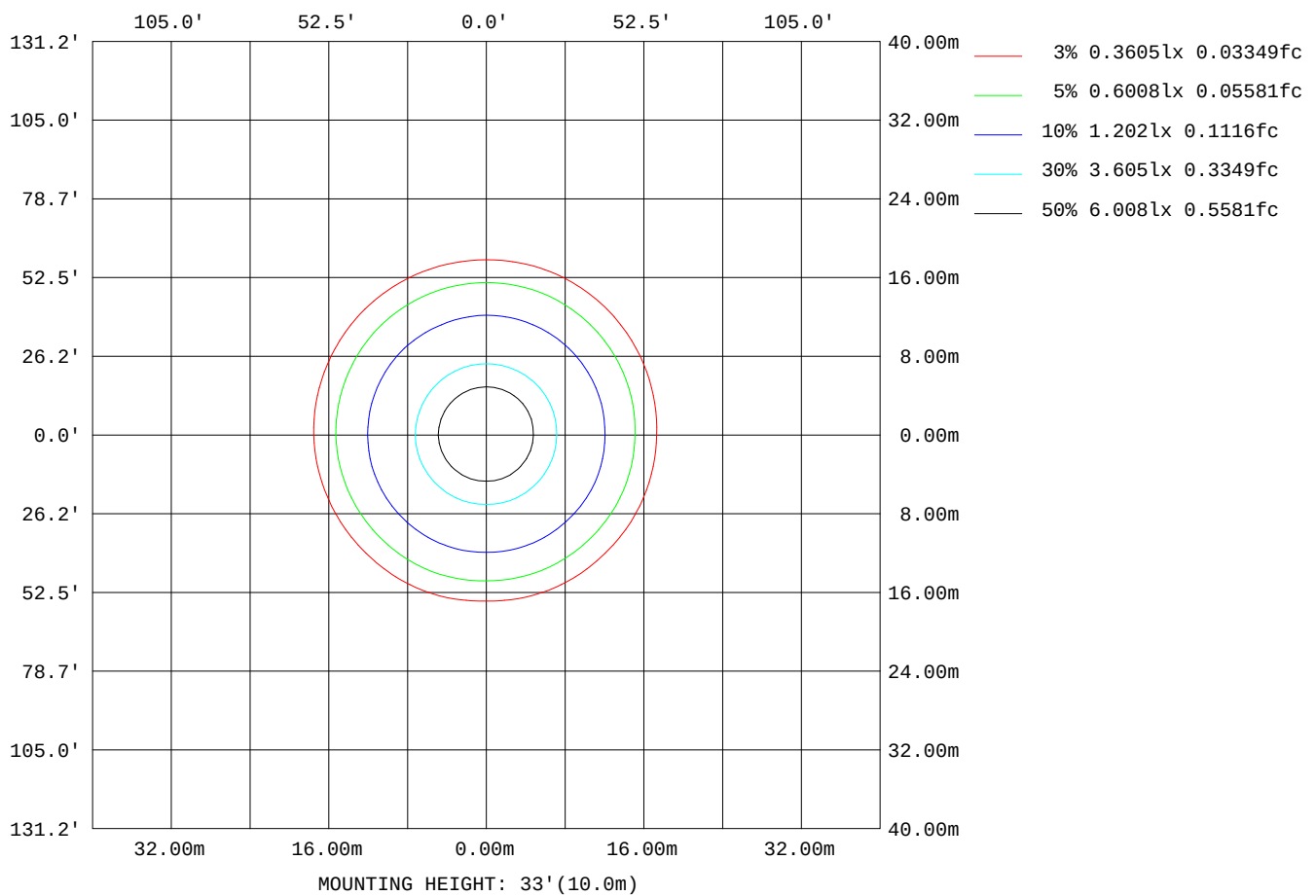
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-28

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:230.26V I:0.0869A P:19.258W PF:0.9624 Freq:49.99Hz Lamp Flux:2144.68x1 lm		
NAME: DL2005-WHTC20C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 150mm	Shielding Angle:

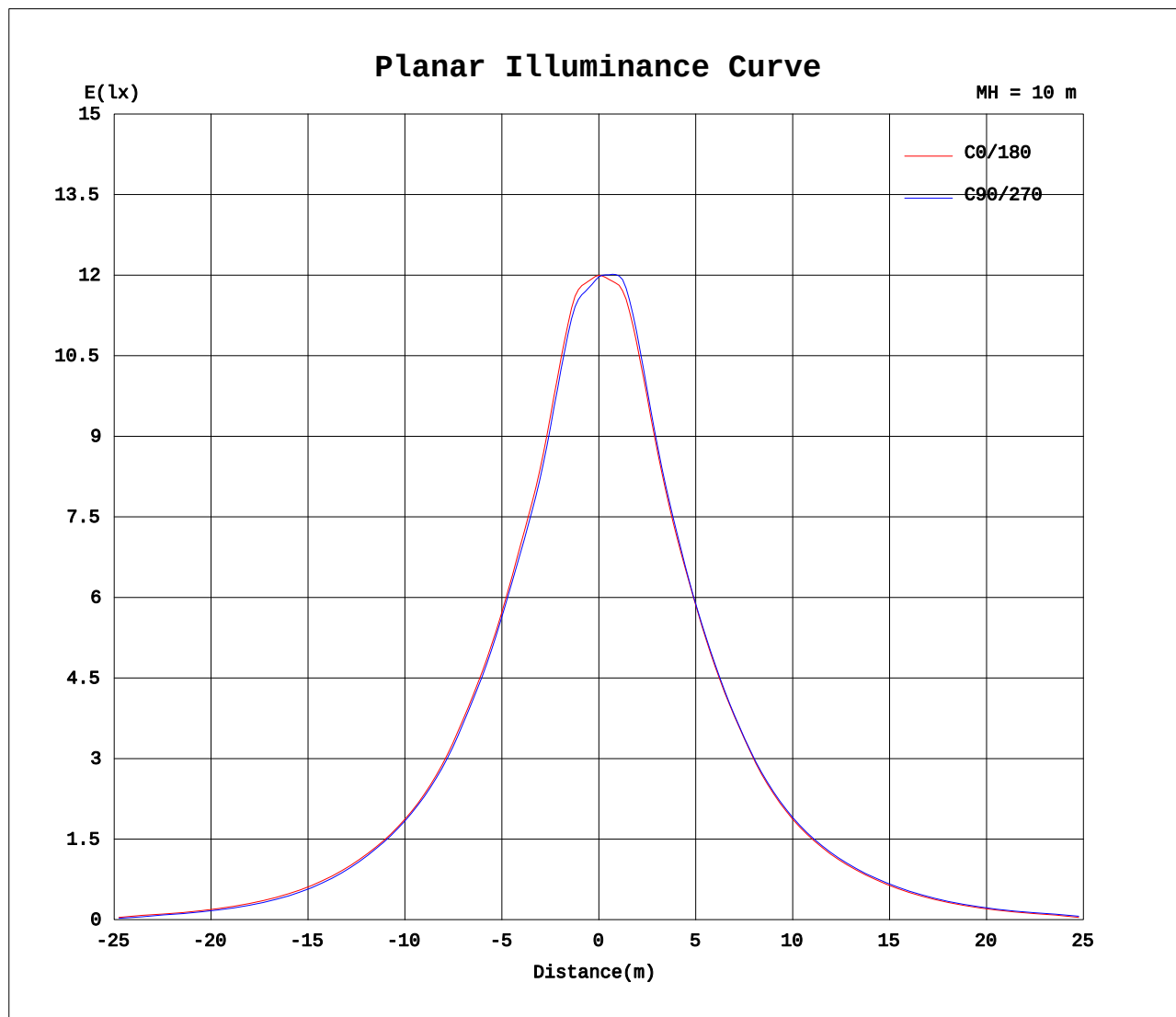
AvgL	cd/m2
L_0~180(65)av	25057
L_0~180(75)av	1350
L_0~180(85)av	2387
L_90~270(65)av	24852
L_90~270(75)av	1391
L_90~270(85)av	2386
L_45(65)av	25109
L_45(75)av	1352
L_45(85)av	2388

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-28

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: 2024-05-28

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:

```