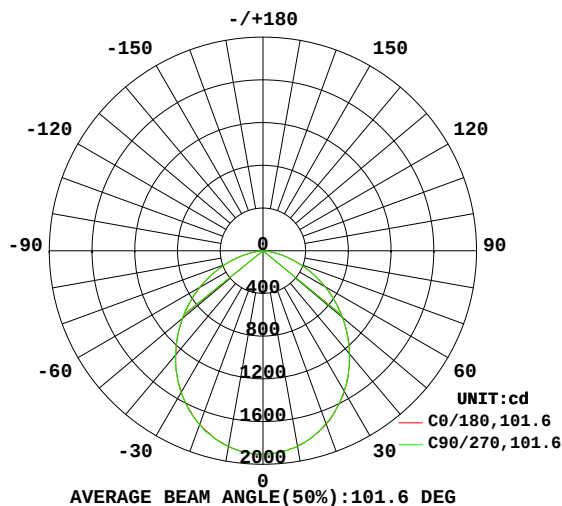


LUMINAIRE PHOTOMETRIC TEST REPORT

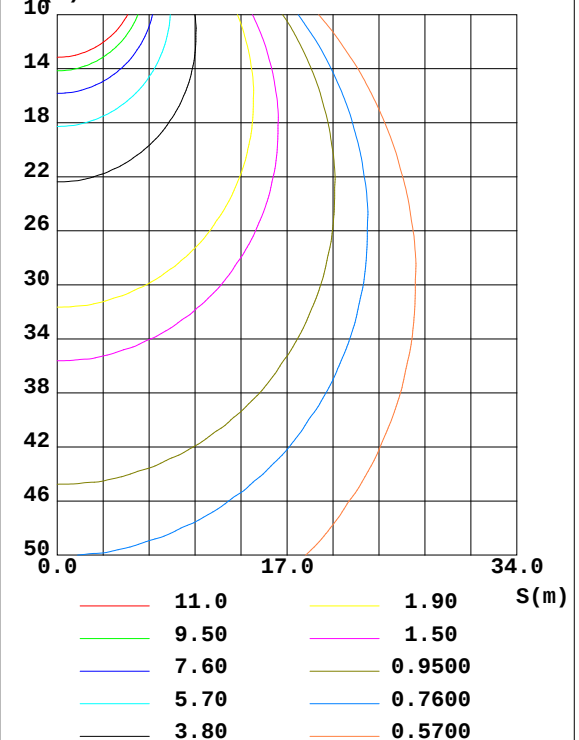
Test:U:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 121.40 lm/W			
MODEL	2835 232 4000K	I _{max} (cd)	1910	S/MH(C0/180)	1.20
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	4721.3	η UP, DN(C0-180)	0.0, 49.7
NOMINAL FLUX(lm)	4721.31	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.35

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:2024-06-22

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:

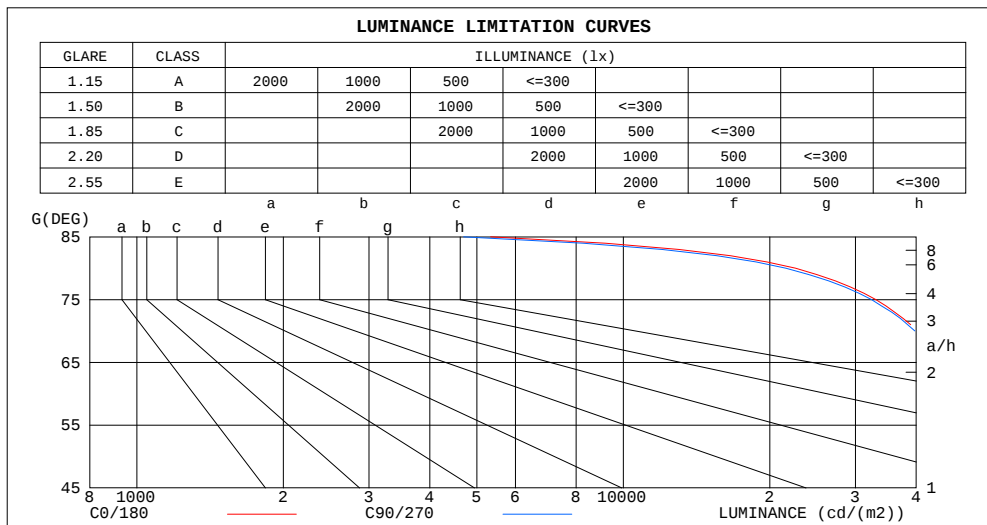
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1858	1858	1860	1859	1859	1860	1862	1860	0- 10	179.7	179.7	3.81, 3.81
20	1726	1725	1719	1722	1731	1733	1732	1735	10- 20	508.5	688.2	14.6, 14.6
30	1521	1520	1518	1520	1530	1529	1535	1529	20- 30	752.6	1441	30.5, 30.5
40	1260	1263	1254	1261	1271	1273	1277	1275	30- 40	876.3	2317	49.1, 49.1
50	970.3	968.7	968.2	969.7	982.9	985.1	988.4	984.8	40- 50	867.3	3184	67.4, 67.4
60	668.9	669.0	666.1	667.0	679.3	682.6	684.1	681.2	50- 60	738.9	3923	83.1, 83.1
70	369.6	367.0	365.5	367.4	379.7	381.5	381.9	381.4	60- 70	517.9	4441	94.1, 94.1
80	105.5	101.9	100.8	102.3	109.7	110.8	111.8	112.0	70- 80	248.1	4689	99.3, 99.3
90	2.571	2.594	2.598	2.594	1.587	1.583	1.571	1.583	80- 90	32.13	4721	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: 2024-06-22

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:

LUMINANCE LIMITATION CURVES

Test:U:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	5337	4694
80	22592	21586
75	33026	32373
70	40206	39758
65	45663	45270
60	49772	49559
55	53317	52979
50	56159	56036
45	59059	58728

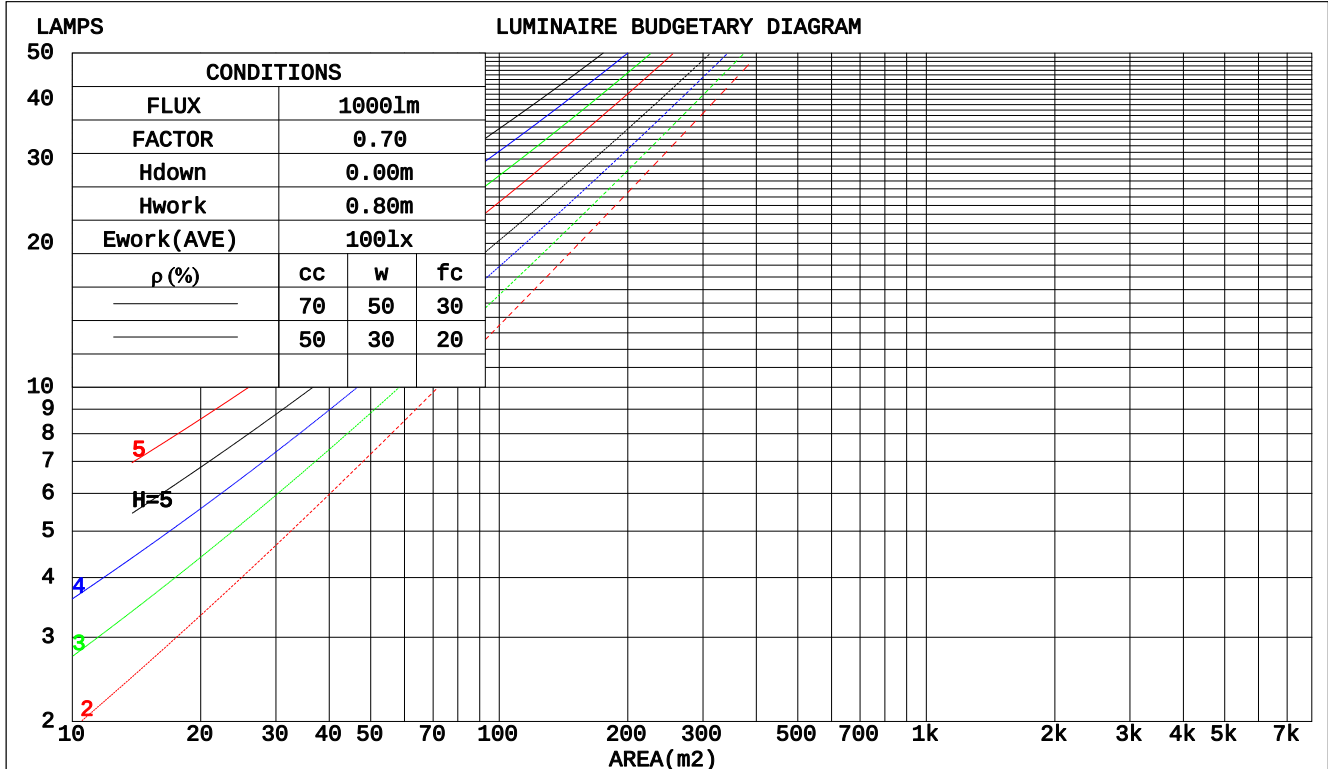
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.92	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.77	.74	.72
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.74	.69	.65	.72	.67	.64	.62
4.0	.73	.64	.58	.71	.63	.57	.69	.62	.57	.67	.61	.56	.64	.59	.55	.53
5.0	.65	.56	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.43	.54	.48	.43	.53	.47	.43	.41
7.0	.53	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.38	.48	.42	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.34	.45	.39	.34	.32
9.0	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm					
NAME: DL4001-BKTC DPS02			TYPE:		WEIGHT:
SPEC.: black RA80 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 185mm		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	.283	.161	.051	.276	.157	.050	.263	.151	.048	.251	.145	.046	.239	.139	.045	
2.0	.272	.149	.046	.266	.147	.045	.255	.142	.044	.244	.137	.043	.234	.132	.042	
3.0	.255	.136	.041	.250	.134	.040	.240	.130	.039	.230	.126	.039	.221	.123	.038	
4.0	.238	.123	.036	.233	.122	.036	.224	.119	.035	.215	.116	.035	.208	.113	.034	
5.0	.221	.113	.033	.217	.111	.032	.209	.109	.032	.201	.106	.032	.194	.104	.031	
6.0	.206	.103	.030	.202	.102	.029	.195	.100	.029	.188	.098	.029	.182	.096	.028	
7.0	.192	.095	.027	.189	.094	.027	.183	.092	.027	.177	.091	.026	.171	.089	.026	
8.0	.180	.088	.025	.177	.087	.025	.172	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.169	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.152	.077	.022	
10.0	.160	.077	.021	.157	.076	.021	.153	.075	.021	.148	.074	.021	.144	.073	.021	

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	.178	.156	.136	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.145	.114	.087	.100	.079	.061	.057	.046	.035	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm											
NAME: DL4001-BKTC DPS02					TYPE:			WEIGHT:			
SPEC.: black RA80 3000K+5700K					DIM.:			SERIAL No.:			
MFR.:					SUR.: 185mm			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	21.2	22.6	21.4	22.8	23.0	21.1	22.6	21.4	22.8	23.0	
	3H	22.3	23.7	22.6	23.9	24.2	22.3	23.7	22.6	23.9	24.1
	4H	22.7	24.0	23.0	24.3	24.5	22.7	24.0	23.0	24.2	24.5
	6H	22.9	24.1	23.2	24.4	24.7	22.9	24.1	23.2	24.3	24.6
	8H	22.9	24.1	23.2	24.3	24.6	22.8	24.0	23.2	24.3	24.6
	12H	22.9	24.0	23.2	24.3	24.6	22.8	23.9	23.2	24.2	24.5
4H	2H	21.7	22.9	22.0	23.2	23.4	21.6	22.9	22.0	23.2	23.4
	3H	23.0	24.1	23.4	24.4	24.7	23.0	24.1	23.3	24.4	24.7
	4H	23.5	24.5	23.9	24.8	25.2	23.5	24.5	23.8	24.8	25.1
	6H	23.8	24.6	24.1	25.0	25.4	23.7	24.6	24.1	24.9	25.3
	8H	23.8	24.6	24.2	25.0	25.4	23.7	24.6	24.1	24.9	25.3
	12H	23.7	24.5	24.2	24.9	25.3	23.7	24.5	24.1	24.8	25.2
8H	4H	23.6	24.5	24.1	24.8	25.2	23.6	24.4	24.0	24.8	25.2
	6H	24.0	24.7	24.4	25.1	25.5	23.9	24.6	24.4	25.0	25.4
	8H	24.0	24.6	24.5	25.0	25.5	24.0	24.6	24.4	25.0	25.4
	12H	24.0	24.5	24.5	25.0	25.4	23.9	24.5	24.4	24.9	25.4
12H	4H	23.6	24.4	24.0	24.8	25.2	23.6	24.4	24.0	24.7	25.1
	6H	24.0	24.6	24.4	25.0	25.4	23.9	24.5	24.4	24.9	25.4
	8H	24.0	24.5	24.5	25.0	25.5	24.0	24.5	24.4	24.9	25.4
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					
2.0H	+ 0.4 / - 0.3					+ 0.4 / - 0.4					

CIE Pub.117, 4721 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.4)
Area: 0.02688 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

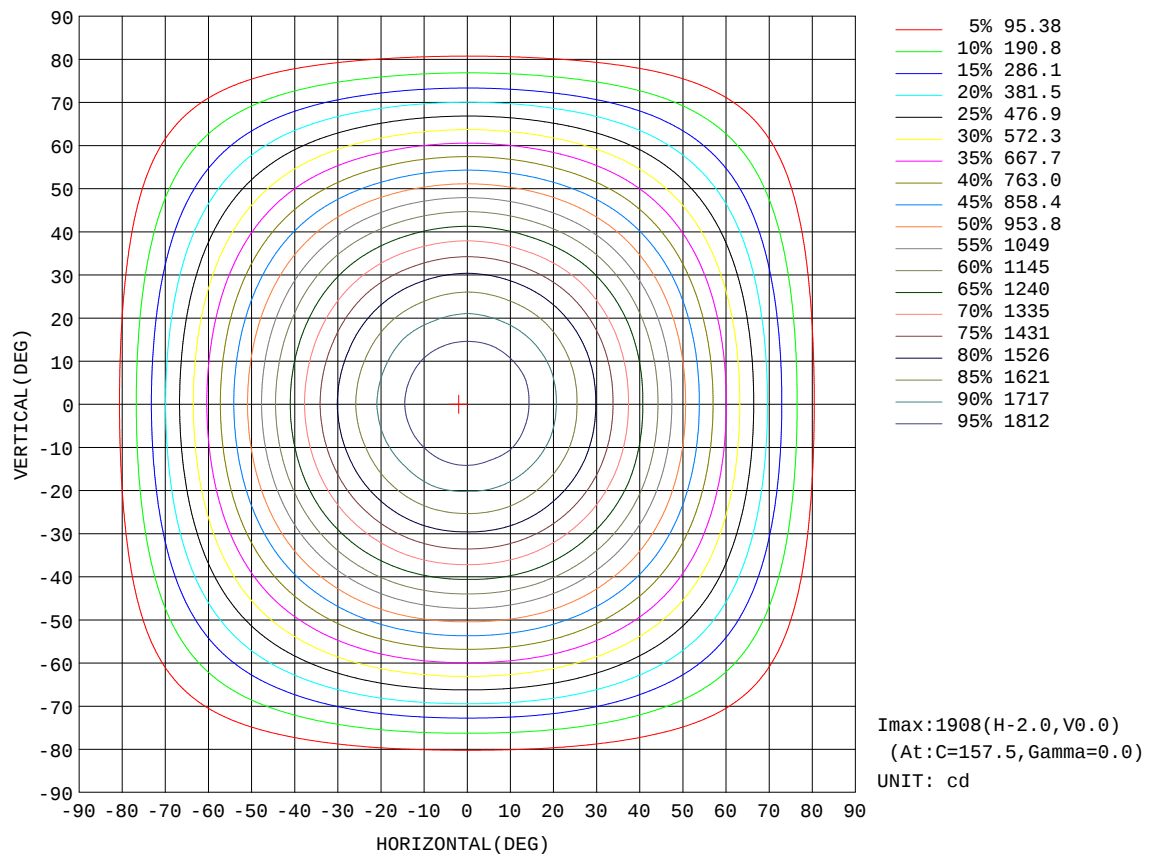
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	49	42	58	48	42	36
0.80	70	59	52	69	59	52	67	58	51	45
1.00	79	68	61	77	67	61	75	69	60	53
1.25	86	76	69	84	75	69	82	74	68	61
1.50	90	81	75	89	80	74	86	79	73	66
2.00	97	89	83	95	88	82	92	86	81	73
2.50	101	93	88	99	92	87	95	89	85	77
3.00	104	97	92	102	96	91	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
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:2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



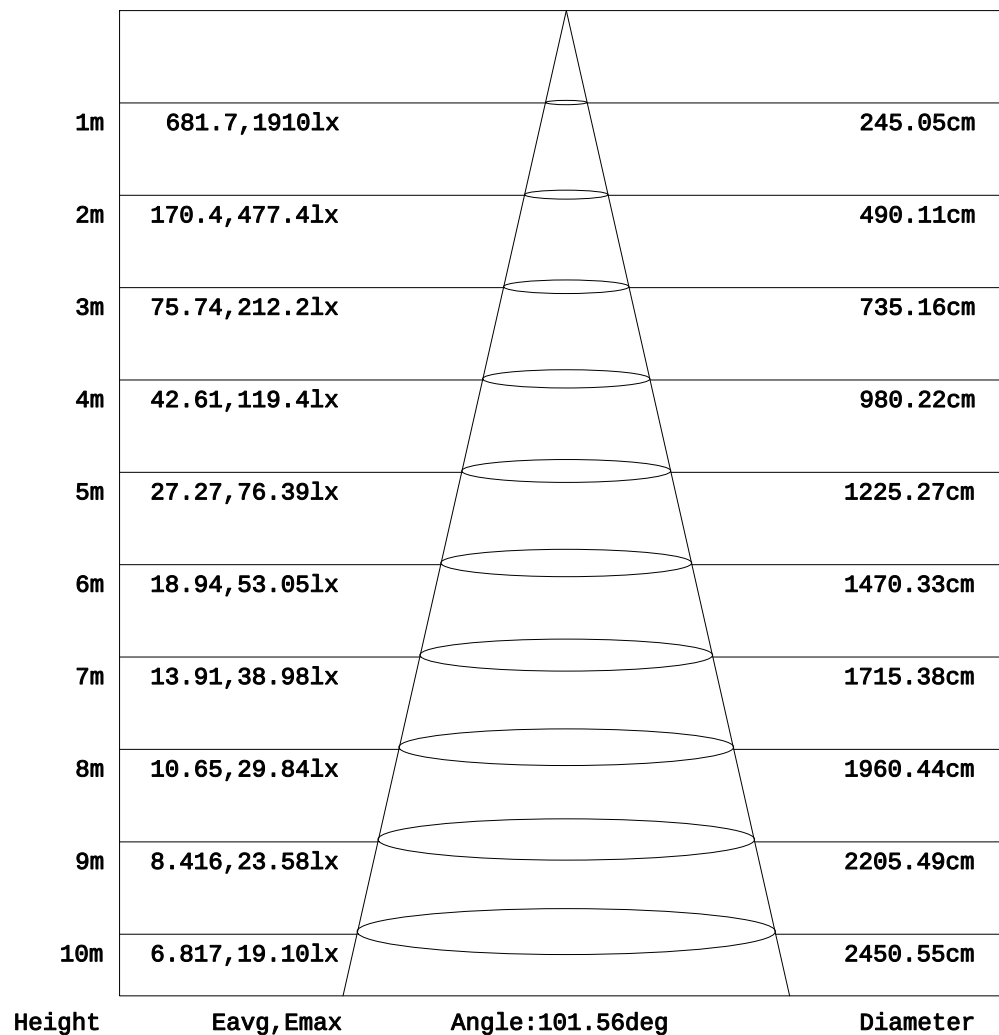
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

Flux out:3266 lm



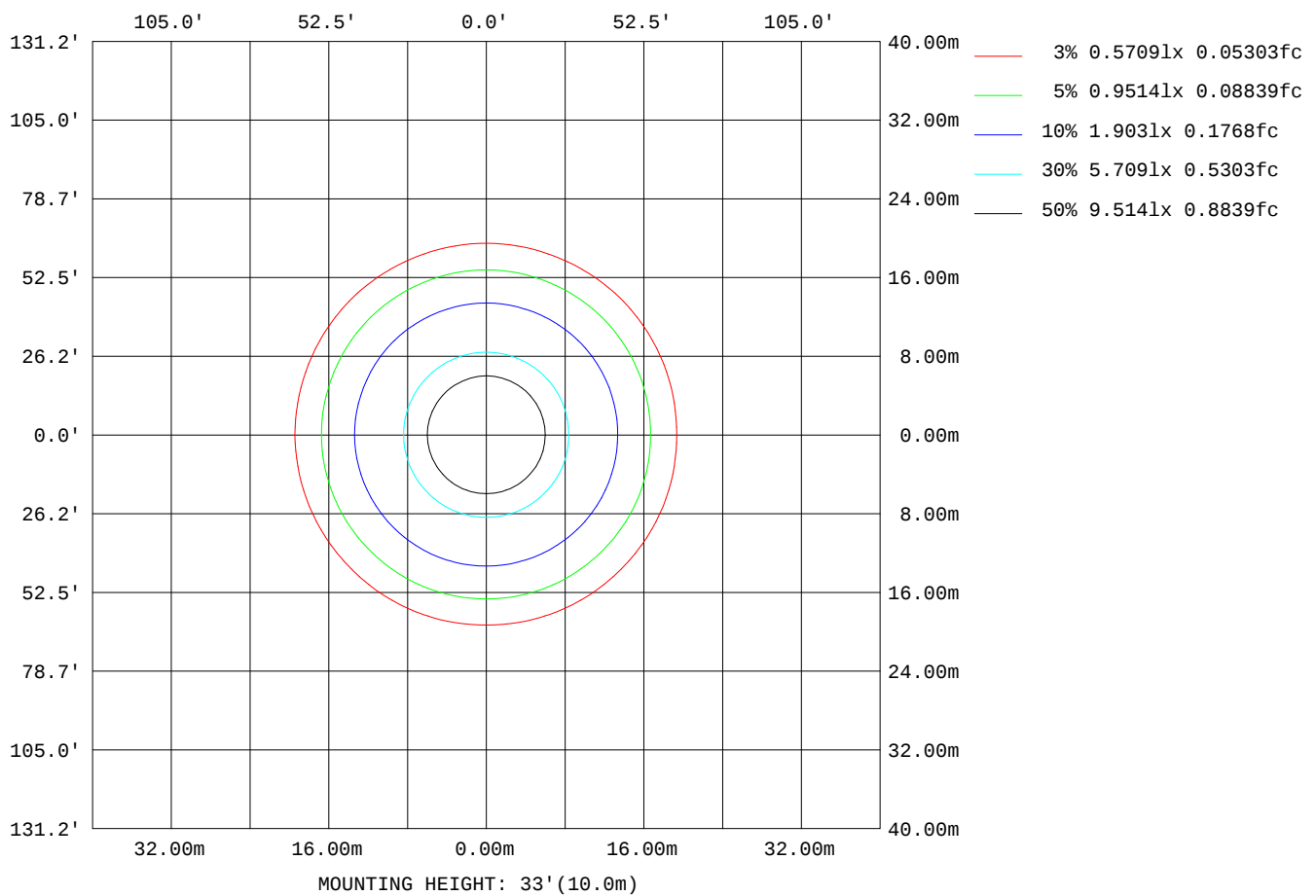
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-06-22

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:230.16V I:0.1763A P:38.891W PF:0.9586 Freq:49.99Hz Lamp Flux:4721.31x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

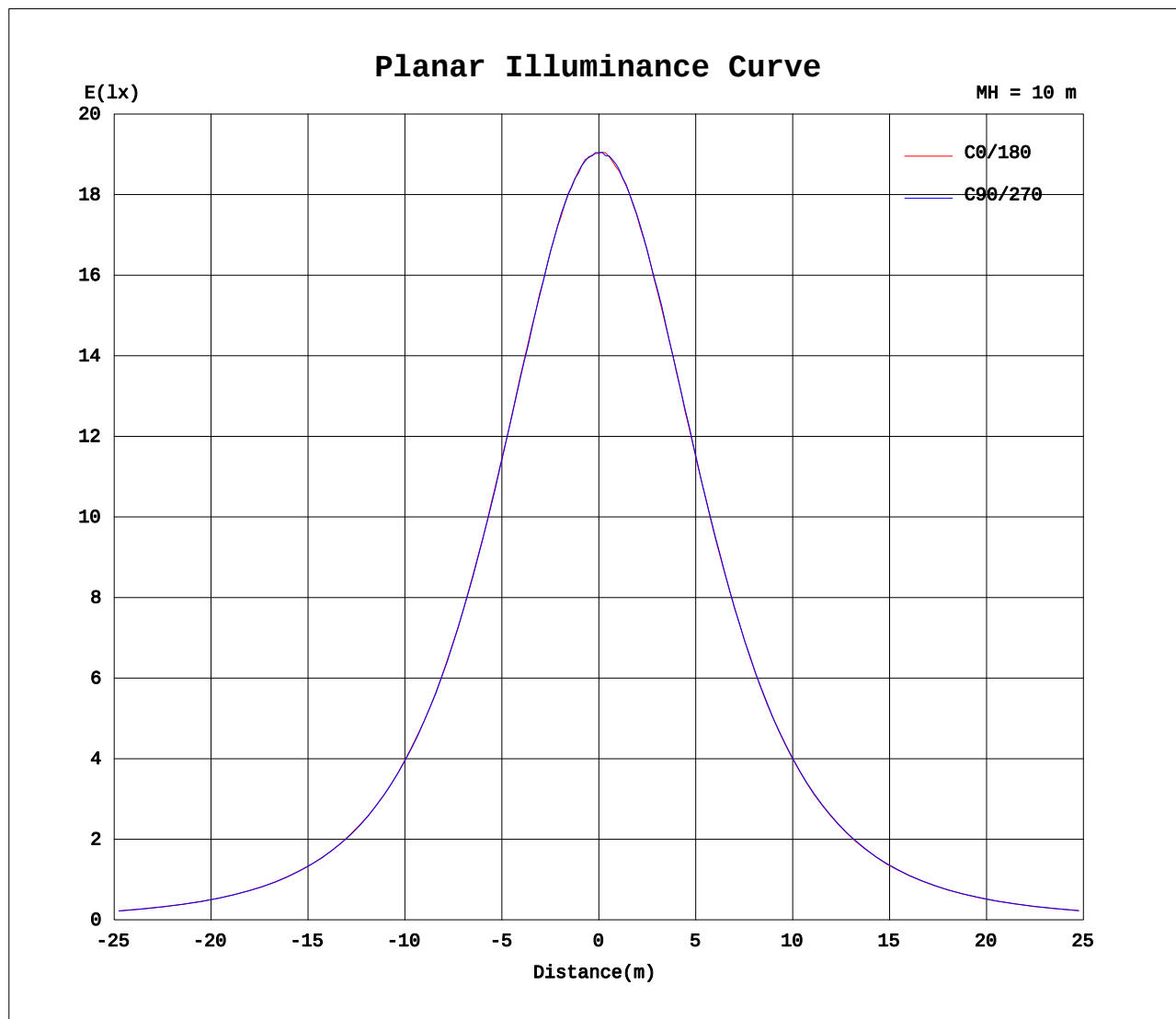
AvgL	cd/m2
L_0~180(65)av	46068
L_0~180(75)av	33553
L_0~180(85)av	5584
L_90~270(65)av	46075
L_90~270(75)av	33421
L_90~270(85)av	5666
L_45(65)av	46065
L_45(75)av	33470
L_45(85)av	5621

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-06-22

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: 2024-06-22

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:

```