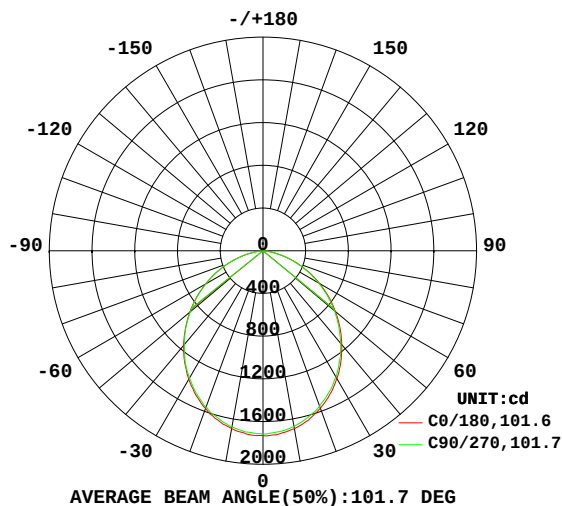


LUMINAIRE PHOTOMETRIC TEST REPORT

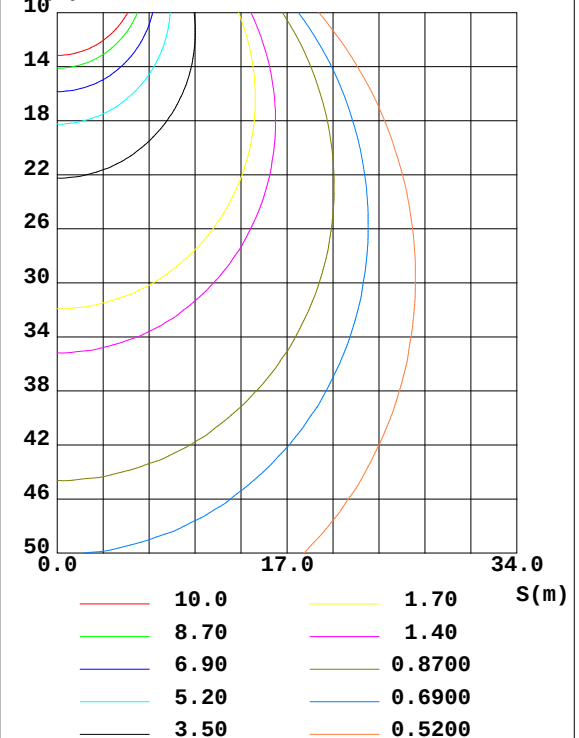
Test:U:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.79 lm/W			
MODEL	2835 232 3000K	I _{max} (cd)	1734	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)	4256.0	η UP, DN(C0-180)	0.0, 49.7
NOMINAL FLUX(lm)	4256	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:

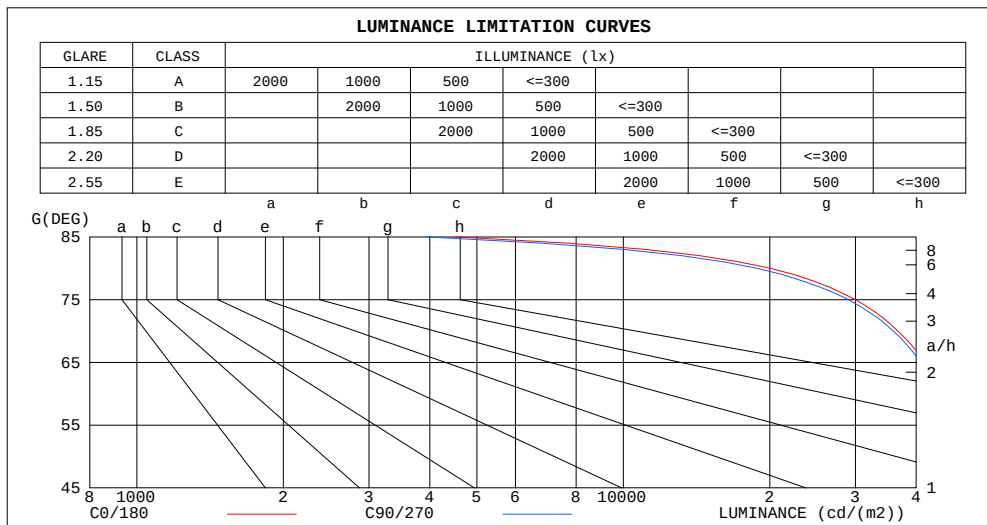
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1693	1678	1671	1663	1690	1679	1675	1667	0- 10	161.9	161.9	3.8,3.8
20	1569	1559	1549	1543	1572	1565	1557	1553	10- 20	458.1	620.0	14.6,14.6
30	1383	1375	1367	1358	1390	1383	1377	1373	20- 30	678.0	1298	30.5,30.5
40	1149	1140	1133	1131	1157	1153	1147	1141	30- 40	789.6	2088	49.1,49.1
50	884.5	878.9	872.7	869.5	894.0	891.7	889.8	882.7	40- 50	782.2	2870	67.4,67.4
60	611.0	605.6	600.5	599.7	619.2	618.8	617.8	613.1	50- 60	667.4	3537	83.1,83.1
70	336.9	332.6	329.7	331.0	345.6	345.8	344.6	342.7	60- 70	468.3	4006	94.1,94.1
80	93.40	89.84	87.71	88.92	96.93	97.62	97.69	97.92	70- 80	222.9	4228	99.4,99.4
90	2.324	2.316	2.309	2.278	1.343	1.328	1.305	1.309	80- 90	27.52	4256	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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 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	4512	3924
80	20009	18791
75	29994	29022
70	36651	35857
65	41667	40939
60	45465	44681
55	48660	47808
50	51194	50509
45	53650	52861

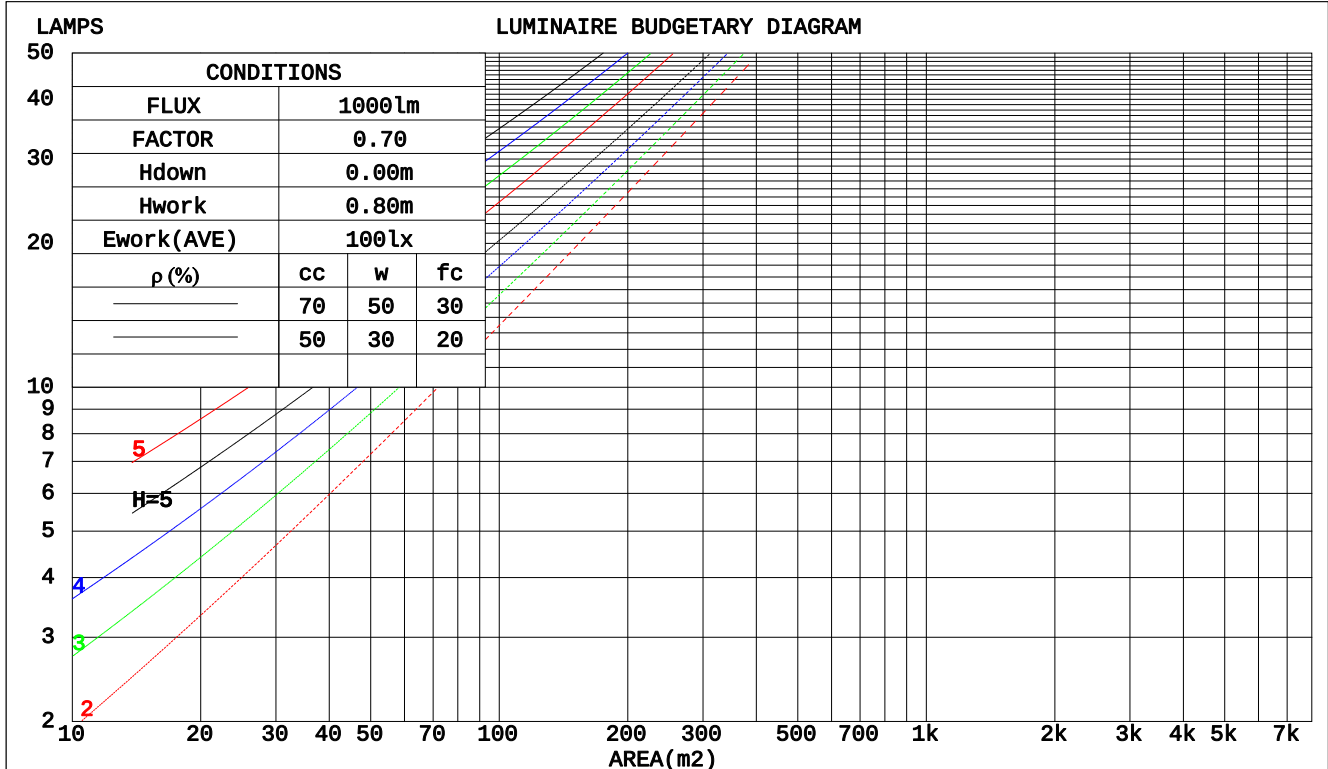
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-06-22

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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 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	.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	.68	.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	.44	.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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 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	.262	.151	.048	.250	.144	.046	.239	.139	.045		
2.0	.272	.149	.046	.266	.147	.045	.254	.141	.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	.193	.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	.170	.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	.137	.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	.076	.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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 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	22.7	21.5	22.9	23.1	21.2	22.6	21.4	22.8	23.0	
	3H	22.4	23.8	22.7	24.0	24.2	22.3	23.7	22.6	23.9	24.2
	4H	22.8	24.1	23.1	24.3	24.6	22.7	24.0	23.0	24.2	24.5
	6H	23.0	24.2	23.3	24.4	24.7	22.9	24.1	23.2	24.3	24.6
	8H	23.0	24.1	23.3	24.4	24.7	22.8	24.0	23.2	24.3	24.6
	12H	22.9	24.0	23.3	24.3	24.6	22.8	23.9	23.2	24.2	24.5
4H	2H	21.7	23.0	22.0	23.2	23.5	21.7	22.9	22.0	23.2	23.4
	3H	23.1	24.2	23.4	24.5	24.8	23.0	24.1	23.4	24.4	24.7
	4H	23.6	24.6	23.9	24.9	25.2	23.5	24.5	23.9	24.8	25.1
	6H	23.8	24.7	24.2	25.0	25.4	23.7	24.6	24.1	25.0	25.3
	8H	23.8	24.7	24.2	25.0	25.4	23.7	24.6	24.1	24.9	25.3
	12H	23.8	24.6	24.2	24.9	25.3	23.7	24.4	24.1	24.8	25.2
8H	4H	23.7	24.5	24.1	24.9	25.3	23.6	24.5	24.0	24.8	25.2
	6H	24.0	24.7	24.5	25.1	25.5	23.9	24.6	24.4	25.0	25.4
	8H	24.1	24.7	24.5	25.1	25.5	24.0	24.6	24.4	25.0	25.4
	12H	24.0	24.6	24.5	25.0	25.5	23.9	24.5	24.4	24.9	25.4
12H	4H	23.7	24.4	24.1	24.8	25.2	23.6	24.4	24.0	24.8	25.2
	6H	24.0	24.6	24.5	25.0	25.5	23.9	24.5	24.4	24.9	25.4
	8H	24.1	24.6	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 / - 0.4					+ 0.4 / - 0.4					

CIE Pub.117, 4256 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.0)
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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

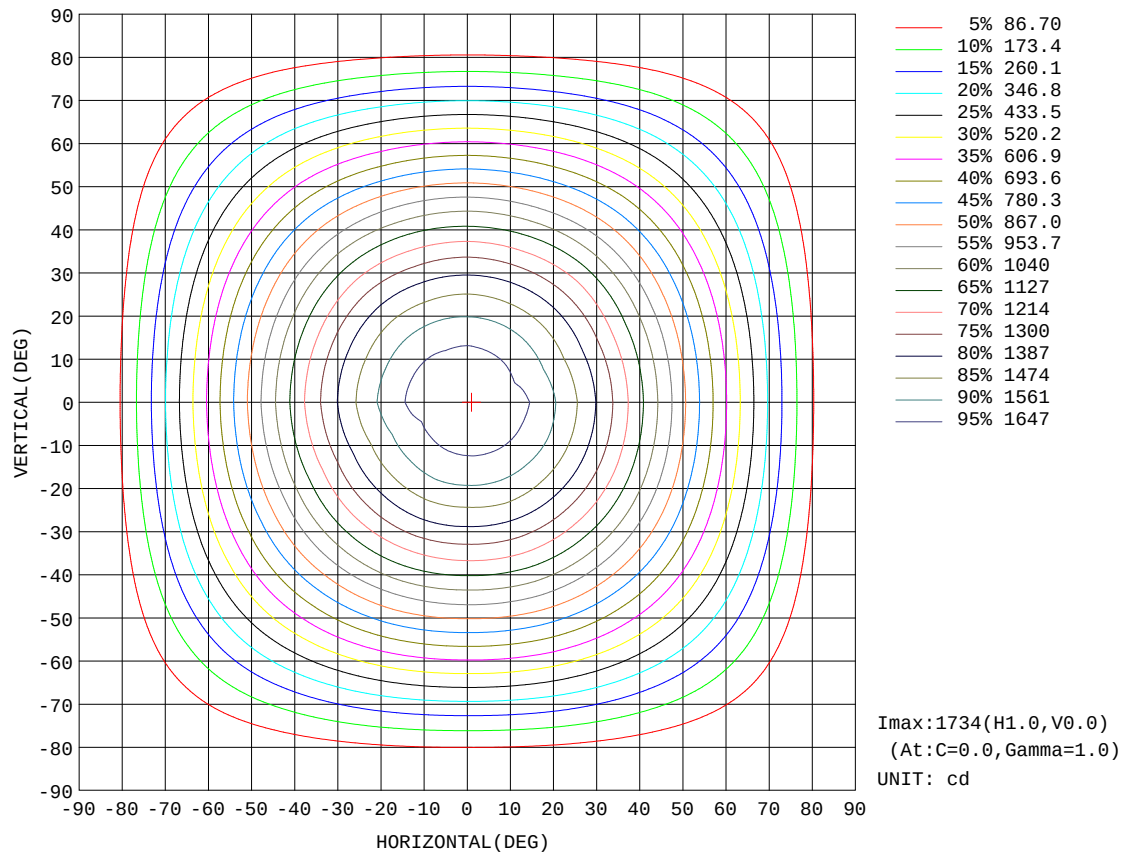
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	49	42	58	48	42	36
0.80	70	59	52	69	59	52	67	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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

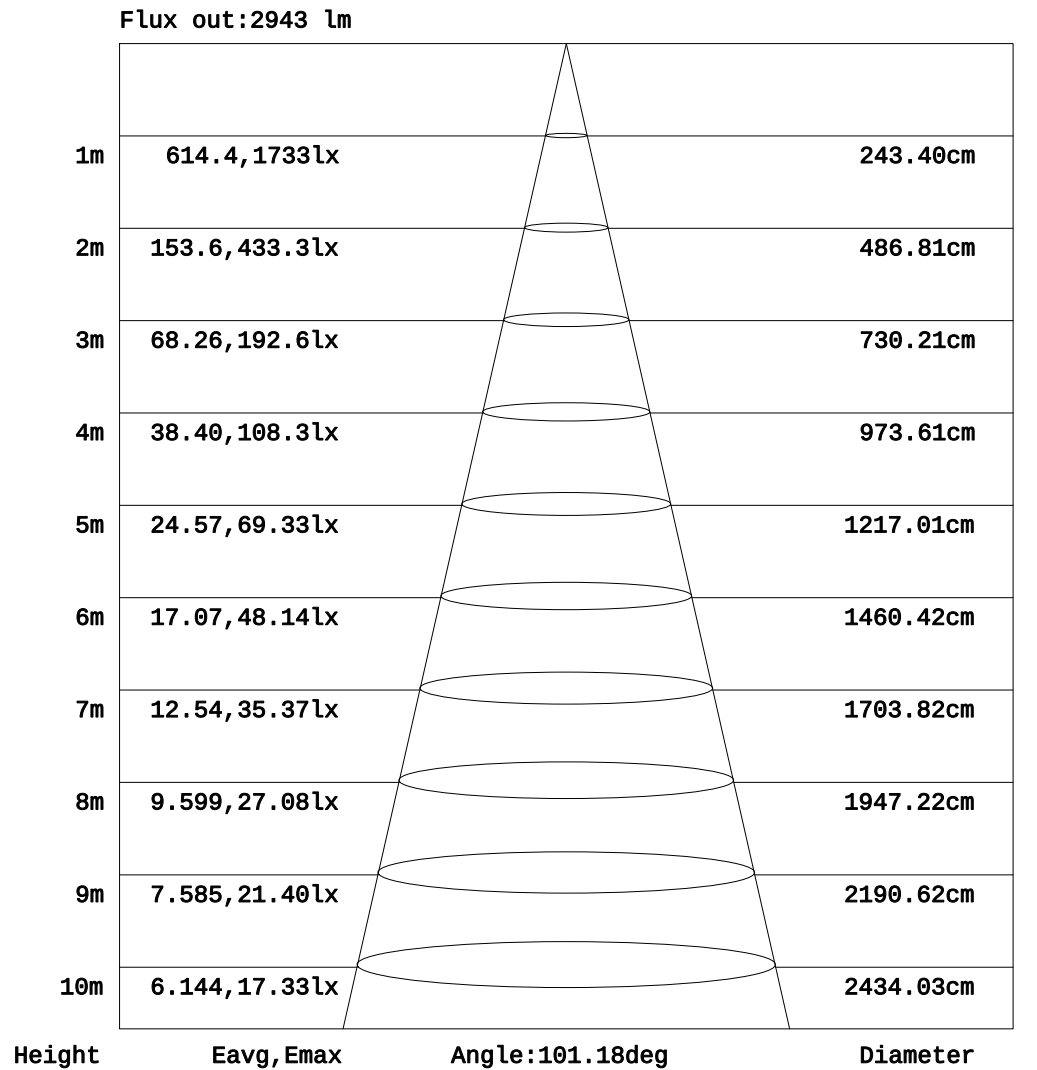


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-06-22

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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



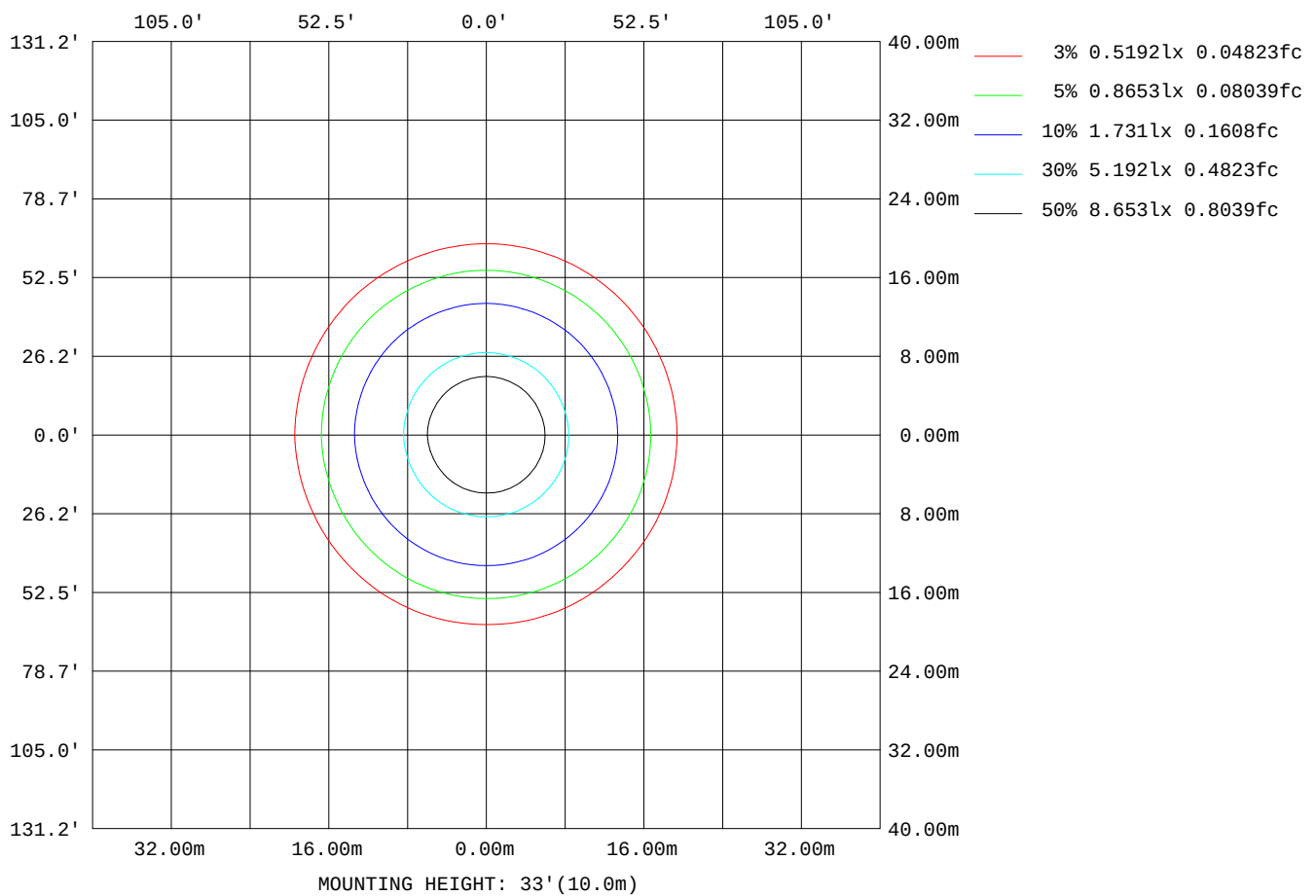
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 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:230.18V I:0.1855A P:41.005W PF:0.9606 Freq:49.99Hz Lamp Flux:4256x1 lm		
NAME: DL4001-BKTC DPS02	TYPE:	WEIGHT:
SPEC.: black RA80 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

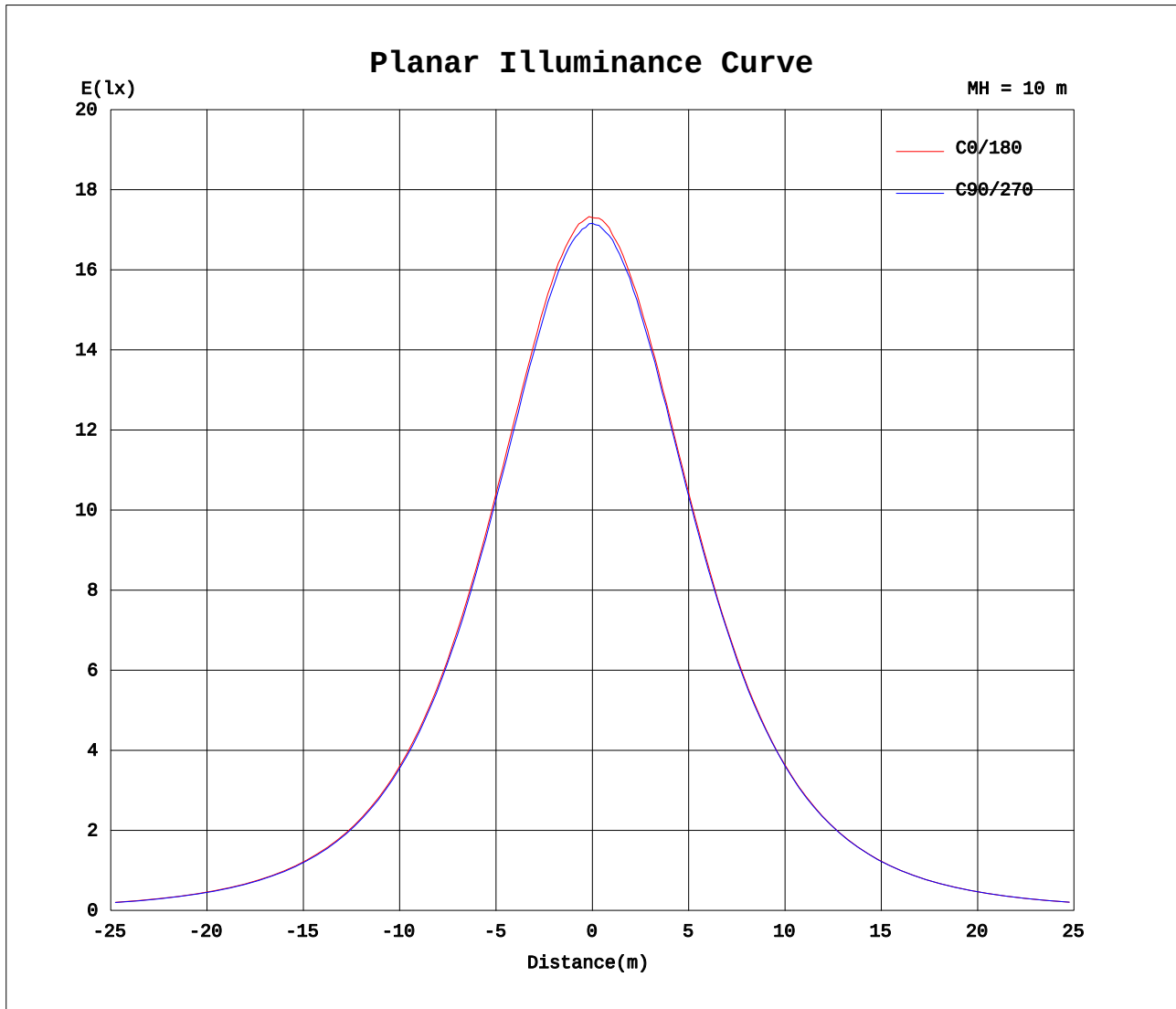
AvgL	cd/m2
L_0~180(65)av	42012
L_0~180(75)av	30455
L_0~180(85)av	4657
L_90~270(65)av	41646
L_90~270(75)av	29949
L_90~270(85)av	4655
L_45(65)av	41618
L_45(75)av	30043
L_45(85)av	4641

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:

```