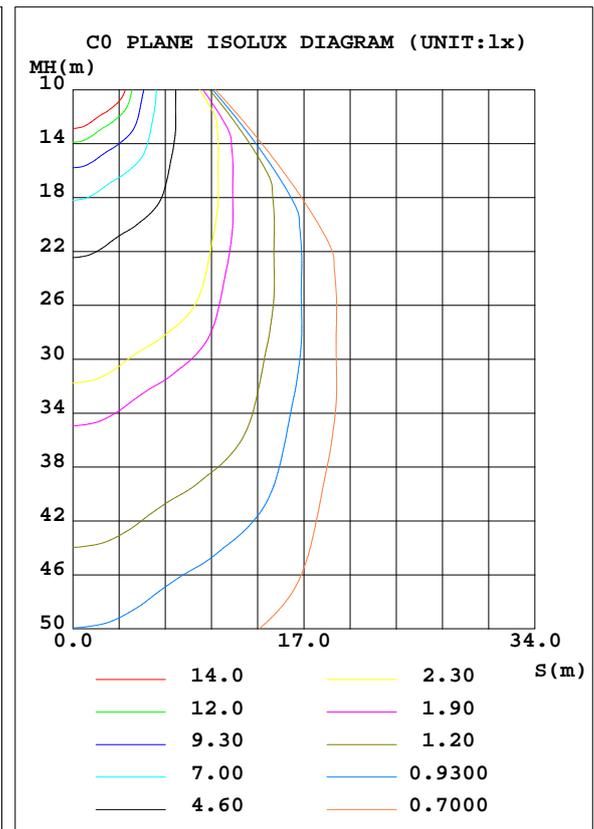
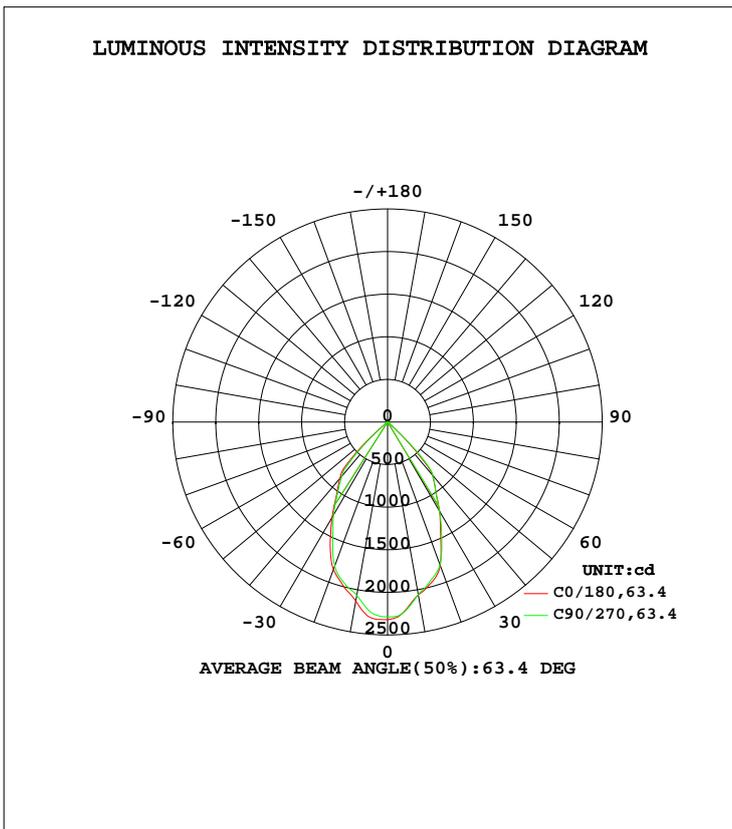


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.24 lm/W			
MODEL	TB25141209 3000K	I <sub>max</sub> (cd)	2320	S/MH(C0/180)	0.95
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.92
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2478.4	η UP, DN(C0-180)	0.0,49.4
NOMINAL FLUX(lm)	2478.37	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.05



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

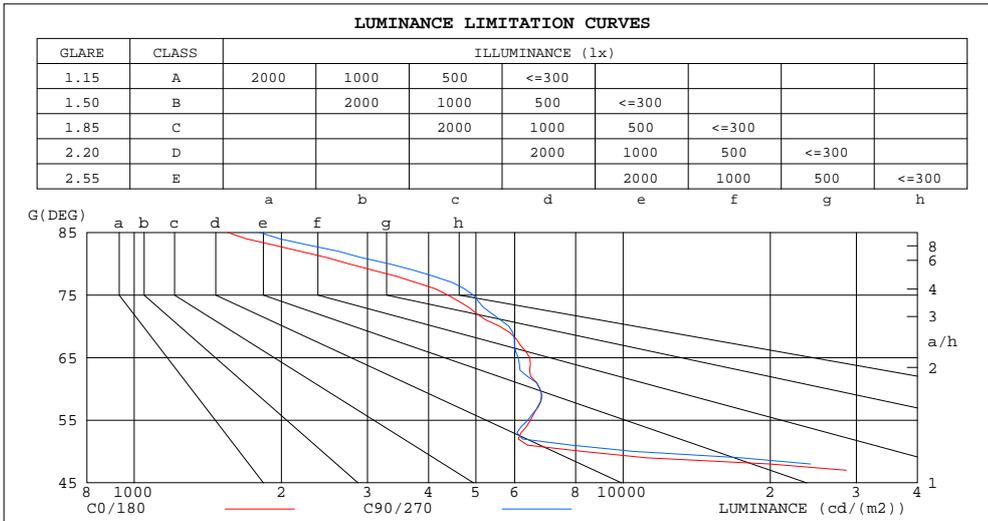
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	2060	2052	2058	2074	2135	2108	2066	2031	0- 10	208.0	208.0	8.39,8.39
20	1791	1785	1784	1792	1841	1827	1801	1778	10- 20	547.5	755.5	30.5,30.5
30	1211	1199	1206	1231	1295	1289	1259	1224	20- 30	692.6	1448	58.4,58.4
40	816.5	815.6	817.9	831.5	864.0	855.0	828.7	825.6	30- 40	630.2	2078	83.9,83.9
50	41.69	44.68	52.98	59.27	66.28	62.13	60.08	47.55	40- 50	338.8	2417	97.5,97.5
60	26.55	26.15	26.52	26.71	27.67	27.17	27.72	26.56	50- 60	27.87	2445	98.7,98.7
70	15.00	15.53	15.68	15.55	16.79	17.49	16.84	15.59	60- 70	20.93	2466	99.5,99.5
80	3.735	3.846	4.520	5.124	5.843	5.305	4.735	4.148	70- 80	10.67	2477	99.9,99.9
90	0.4246	0.4246	0.3822	0.3667	0.0849	0.0811	0.0772	0.0772	80- 90	1.825	2478	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:2023-12-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1552	1801
80	2740	3316
75	4380	4938
70	5588	5839
65	6443	6100
60	6765	6756
55	6463	6386
50	8262	10500
45	65203	78822

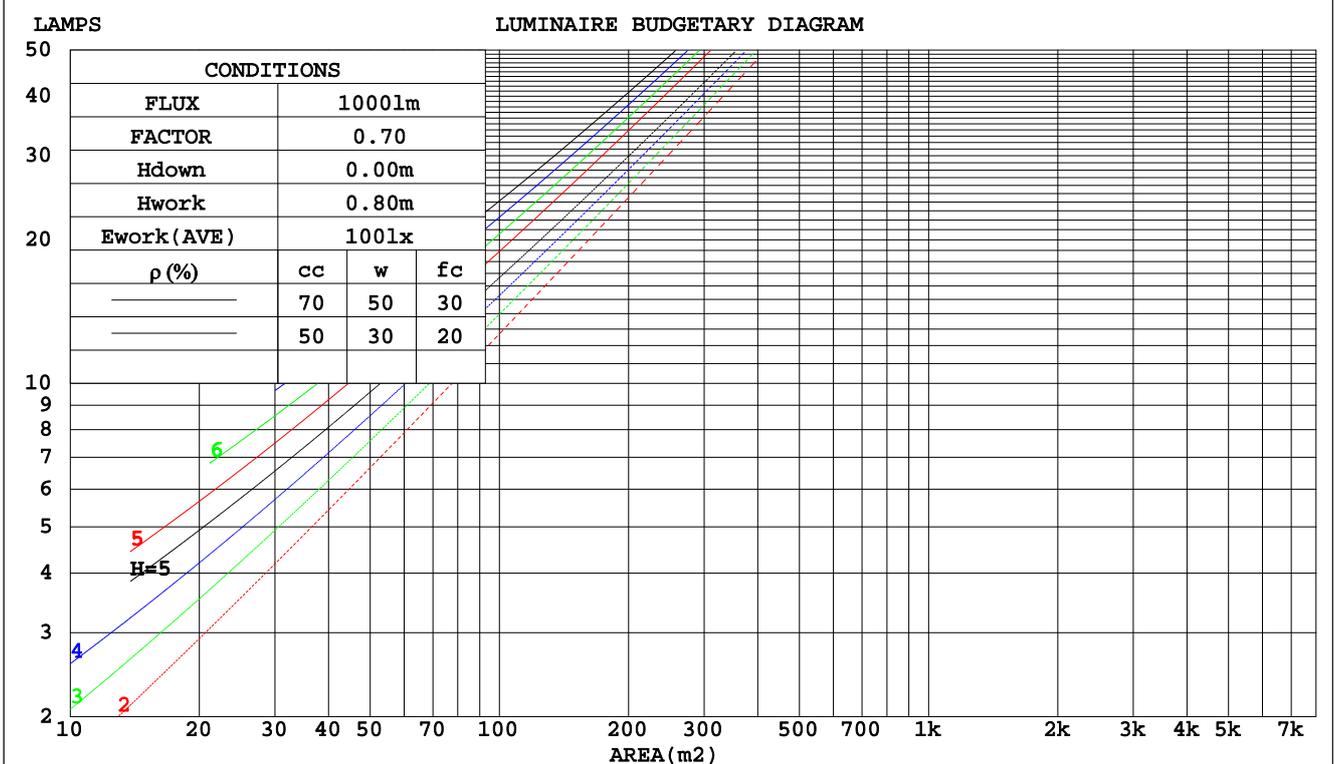
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-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:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
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	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.97	.95	.94	.92
2.0	1.01	.97	.93	.00	.96	.92	.96	.93	.90	.93	.91	.88	.91	.88	.86	.85
3.0	.94	.88	.84	.92	.87	.83	.90	.85	.82	.87	.84	.81	.85	.82	.79	.78
4.0	.87	.81	.76	.85	.80	.76	.83	.78	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.80	.74	.69	.79	.73	.69	.78	.72	.68	.76	.71	.68	.74	.70	.67	.66
6.0	.75	.68	.64	.74	.68	.63	.72	.67	.63	.71	.66	.62	.70	.65	.62	.60
7.0	.70	.63	.58	.69	.63	.58	.68	.62	.58	.66	.61	.58	.65	.61	.57	.56
8.0	.65	.59	.54	.64	.58	.54	.63	.58	.54	.62	.57	.53	.61	.57	.53	.52
9.0	.61	.55	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.58	.53	.50	.48
10.0	.57	.51	.47	.57	.51	.47	.56	.50	.47	.55	.50	.46	.54	.50	.46	.45



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity: 65.0%  
 Test Distance: 7.450m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.193	.110	.035	.186	.106	.034	.174	.100	.032	.162	.093	.030	.151	.088	.028	
2.0	.187	.102	.031	.181	.100	.031	.170	.095	.029	.160	.090	.028	.151	.085	.027	
3.0	.178	.095	.028	.173	.093	.028	.164	.089	.027	.156	.085	.026	.148	.082	.025	
4.0	.170	.088	.026	.166	.087	.026	.158	.084	.025	.150	.081	.024	.143	.078	.024	
5.0	.162	.083	.024	.159	.081	.024	.152	.079	.023	.145	.076	.023	.139	.074	.022	
6.0	.155	.078	.022	.152	.077	.022	.145	.074	.022	.139	.072	.021	.134	.071	.021	
7.0	.148	.073	.021	.145	.072	.021	.139	.070	.020	.134	.069	.020	.129	.067	.020	
8.0	.141	.069	.019	.139	.068	.019	.134	.067	.019	.129	.065	.019	.125	.064	.019	
9.0	.135	.065	.018	.133	.065	.018	.128	.063	.018	.124	.062	.018	.120	.061	.018	
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.116	.058	.017	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.172	.157	.144	.147	.135	.124	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.136	.114	.096	.093	.079	.067	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.057	.111	.076	.050	.077	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.105	.068	.041	.073	.048	.029	.042	.028	.017	.014	.009	.006	
7.0	.116	.071	.040	.100	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.111	.065	.034	.095	.057	.030	.066	.040	.021	.038	.024	.013	.012	.008	.004	
9.0	.106	.060	.030	.091	.052	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	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	20.1	21.2	20.4	21.4	21.5	20.3	21.4	20.5	21.5	21.7
3H	20.0	21.0	20.3	21.2	21.4	20.2	21.1	20.4	21.3	21.5
4H	19.9	20.8	20.2	21.1	21.3	20.1	21.0	20.4	21.2	21.5
6H	19.8	20.7	20.1	20.9	21.2	20.0	20.9	20.3	21.1	21.4
8H	19.8	20.6	20.1	20.9	21.1	20.0	20.8	20.3	21.1	21.3
12H	19.8	20.5	20.1	20.8	21.1	19.9	20.7	20.3	21.0	21.3
4H 2H	19.9	20.8	20.2	21.0	21.2	20.1	21.0	20.3	21.2	21.4
3H	19.8	20.5	20.1	20.8	21.1	19.9	20.7	20.3	21.0	21.3
4H	19.7	20.4	20.1	20.7	21.0	19.9	20.6	20.2	20.9	21.2
6H	19.6	20.2	20.0	20.6	20.9	19.8	20.4	20.2	20.8	21.1
8H	19.6	20.2	20.0	20.5	20.9	19.8	20.3	20.2	20.7	21.1
12H	19.5	20.1	19.9	20.4	20.8	19.7	20.2	20.1	20.6	21.0
8H 4H	19.6	20.2	20.0	20.5	20.9	19.8	20.3	20.1	20.7	21.0
6H	19.5	20.0	19.9	20.4	20.8	19.7	20.2	20.1	20.5	21.0
8H	19.5	19.9	19.9	20.3	20.7	19.6	20.1	20.1	20.5	20.9
12H	19.4	19.8	19.9	20.2	20.7	19.6	19.9	20.1	20.4	20.9
12H 4H	19.5	20.1	19.9	20.4	20.8	19.7	20.2	20.1	20.6	21.0
6H	19.5	19.9	19.9	20.3	20.7	19.6	20.0	20.1	20.5	20.9
8H	19.4	19.8	19.9	20.2	20.7	19.6	19.9	20.1	20.4	20.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.9 / - 9.9					+ 3.0 / - 9.8				
1.5H	+ 4.3 / -10.6					+ 4.0 / -10.5				
2.0H	+ 7.9 / - 4.8					+ 8.3 / - 5.5				

CIE Pub.117, 2478 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.2)  
 Area: 0.00785 m2

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

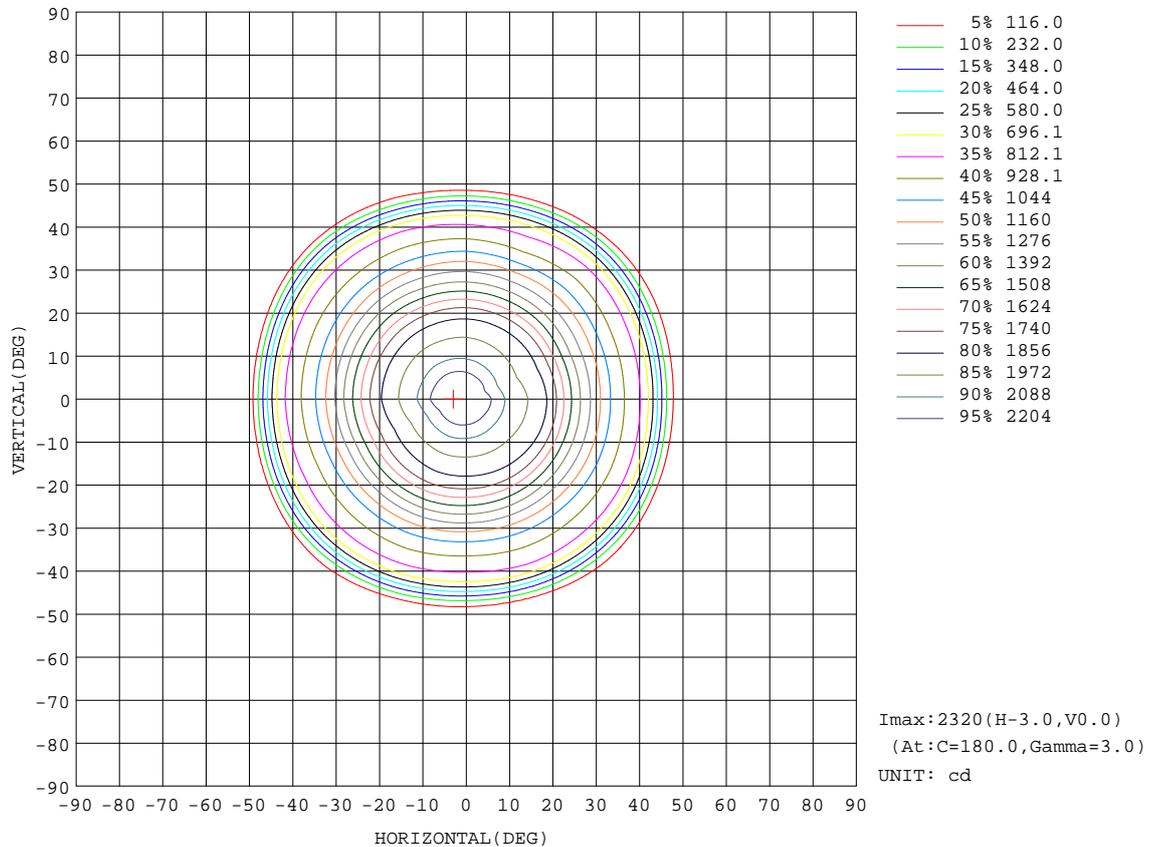
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	81	74	70	81	74	70	80	73	69	65
0.80	90	83	79	89	83	78	88	82	78	74
1.00	96	89	85	95	89	85	93	89	84	80
1.25	100	94	90	99	94	90	97	93	89	85
1.50	103	98	94	102	97	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	104	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	111	109	112	110	108	108	106	105	97
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:2023-12-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:



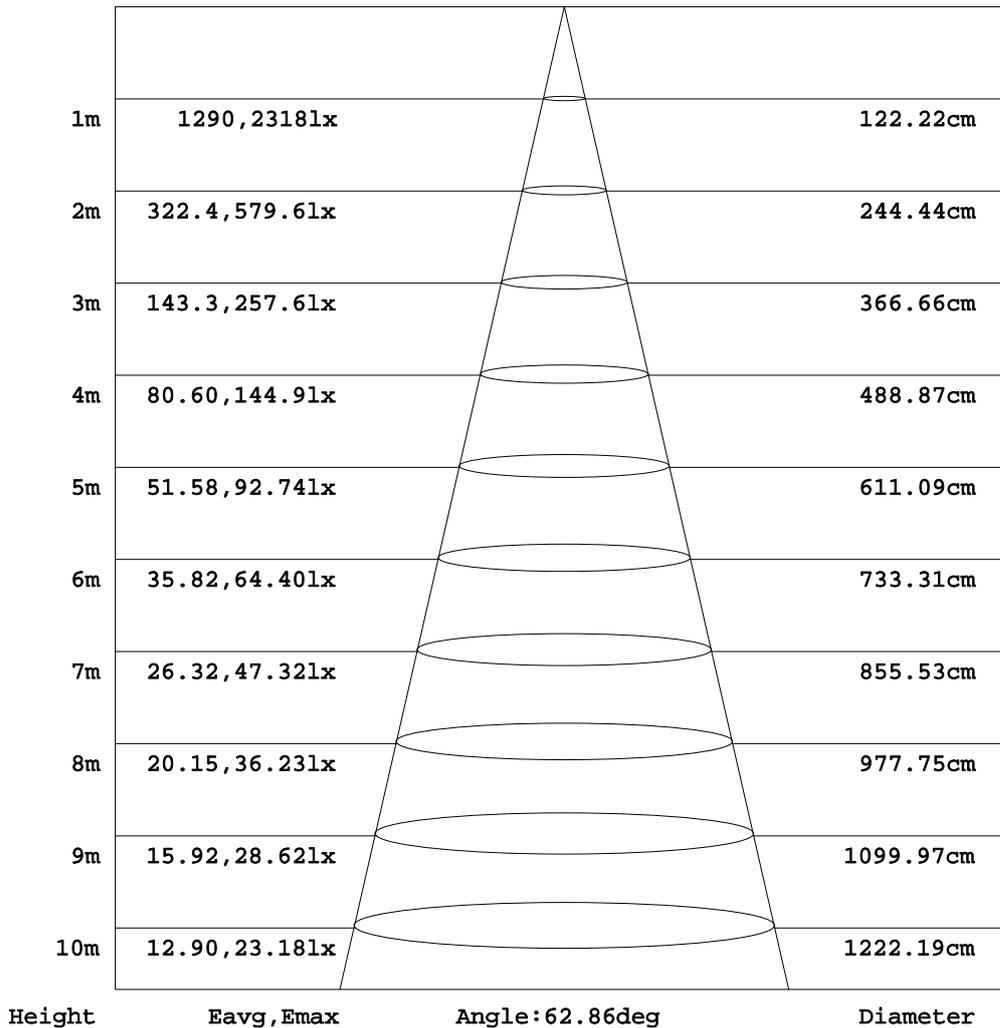
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity: 65.0%  
 Test Distance: 7.450m [K=1.0000]  
 Remarks:

**AAI Figure**

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

Flux out:1582 lm



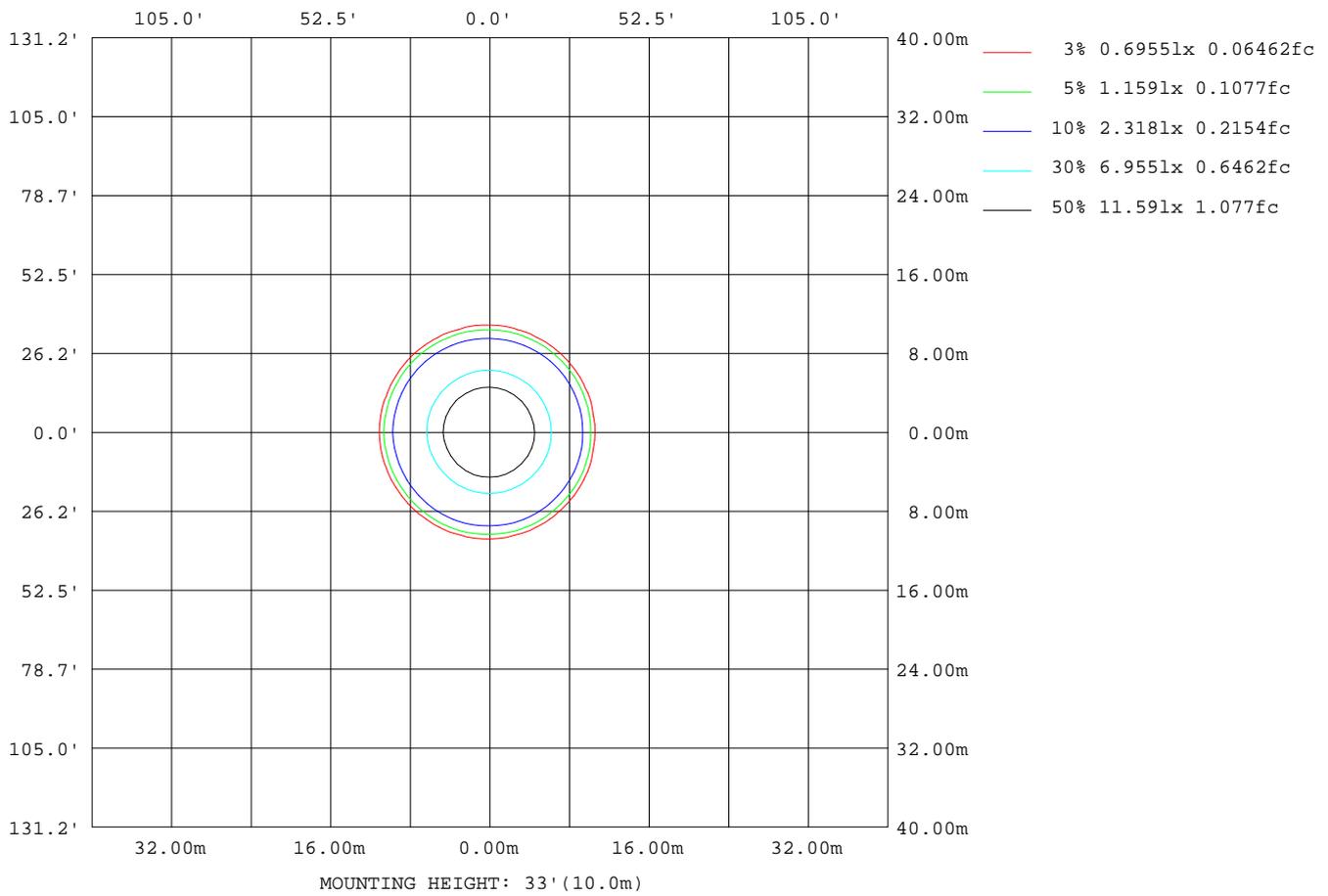
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity:65.0%  
 Test Distance:7.450m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2023-12-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity: 65.0%  
 Test Distance: 7.450m [K=1.0000]  
 Remarks:

LED Avg.L Report

Test:U:220.44V I:0.1422A P:30.887W PF:0.9852 Freq:50.01Hz Lamp Flux:2478.37x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

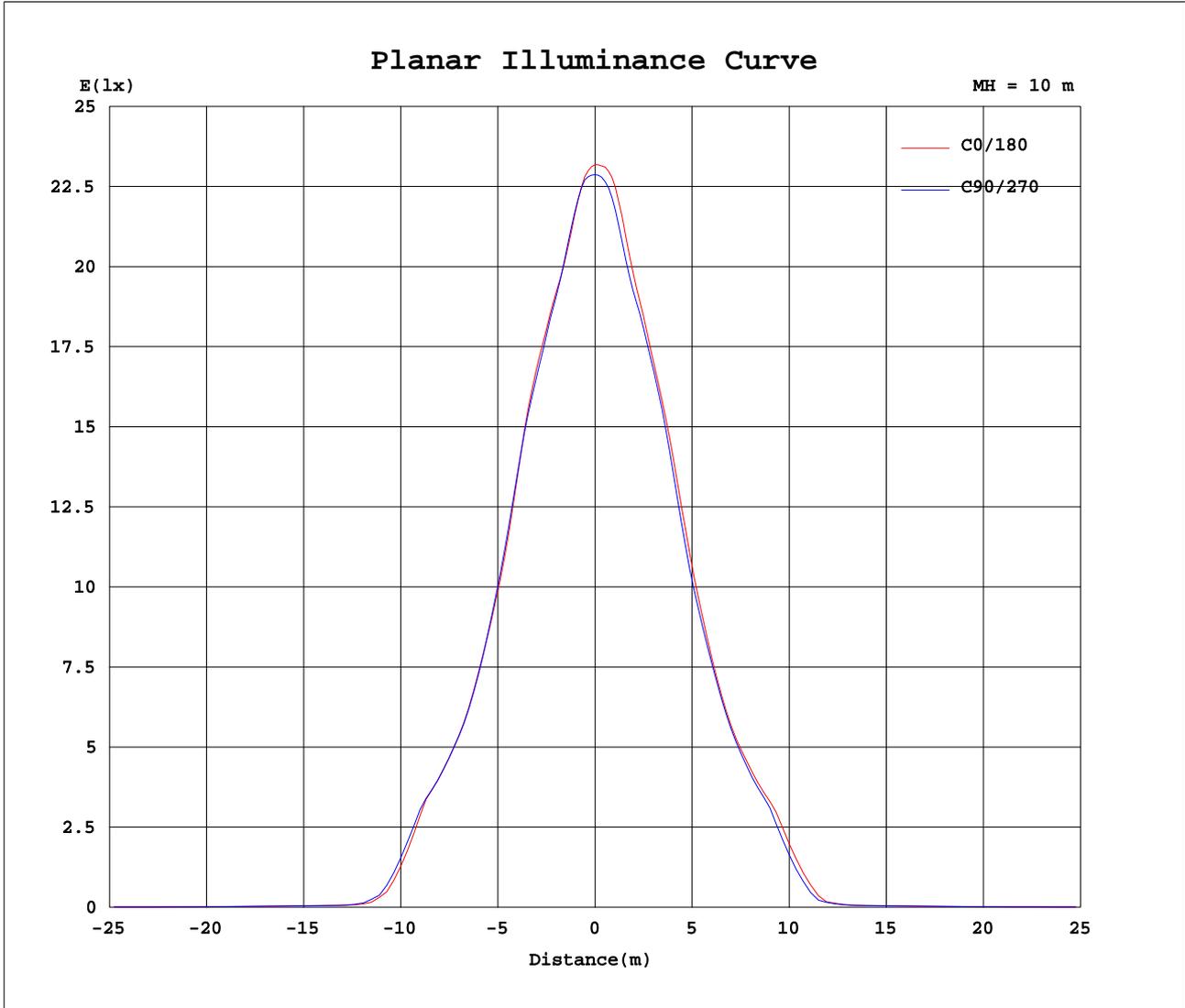
AvgL	cd/m2
L_0~180(65)av	6385
L_0~180(75)av	5019
L_0~180(85)av	1954
L_90~270(65)av	6385
L_90~270(75)av	4955
L_90~270(85)av	1837
L_45(65)av	6257
L_45(75)av	4958
L_45(85)av	1840

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-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: 2023-12-08

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.428  
 Humidity: 65.0%  
 Test Distance: 7.450m [K=1.0000]  
 Remarks:

