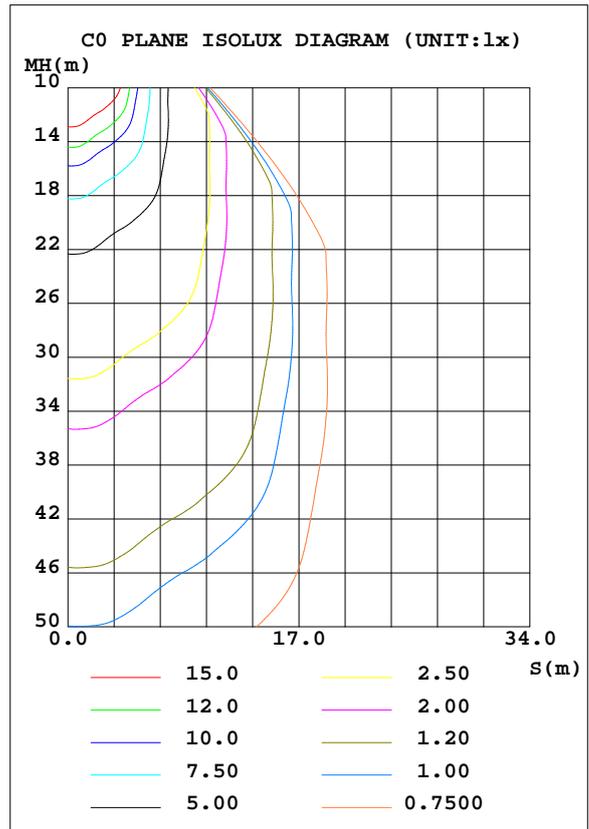
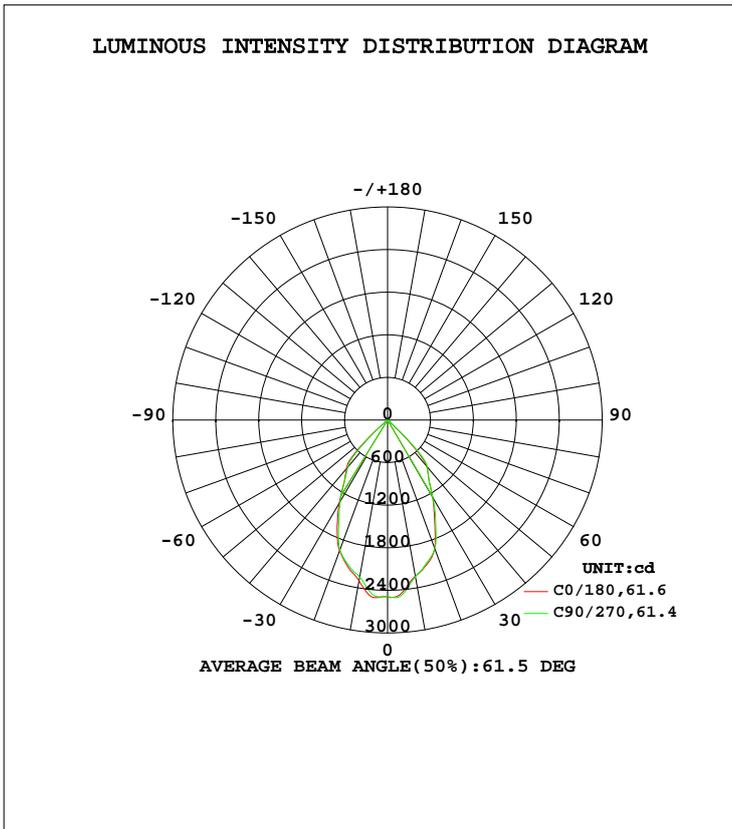


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.44V I:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 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: 85.34 lm/W			
MODEL	TB25141209 5700K	I <sub>max</sub> (cd)	2507	S/MH(C0/180)	0.93
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.92
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2635.1	η UP, DN(C0-180)	0.0,49.4
NOMINAL FLUX(lm)	2635.08	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:

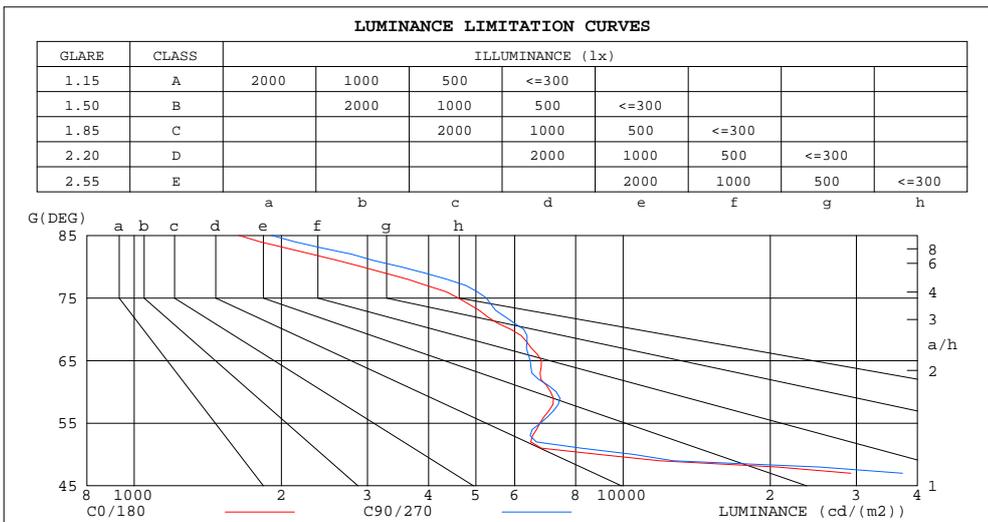
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	2231	2232	2240	2270	2301	2274	2249	2233	0- 10	227.3	227.3	8.63,8.63
20	1924	1931	1930	1941	1963	1962	1946	1940	10- 20	593.2	820.5	31.1,31.1
30	1262	1254	1263	1298	1349	1348	1323	1295	20- 30	739.1	1560	59.2,59.2
40	854.7	857.5	857.1	873.1	889.1	887.3	861.9	873.4	30- 40	654.6	2214	84,84
50	44.98	46.68	52.97	60.54	67.18	62.07	60.34	50.97	40- 50	355.9	2570	97.5,97.5
60	27.90	28.04	28.65	28.81	29.28	29.19	30.00	28.45	50- 60	29.58	2600	98.7,98.7
70	15.81	16.50	16.81	16.72	17.60	18.63	17.90	16.69	60- 70	22.18	2622	99.5,99.5
80	3.978	4.067	4.772	5.399	6.059	5.548	5.009	4.425	70- 80	11.30	2633	99.9,99.9
90	0.4401	0.4324	0.4246	0.3899	0.0811	0.0772	0.0772	0.0772	80- 90	1.936	2635	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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 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	1637	1909
80	2918	3501
75	4599	5253
70	5890	6262
65	6803	6458
60	7108	7298
55	6759	6777
50	8915	10498
45	71287	83821

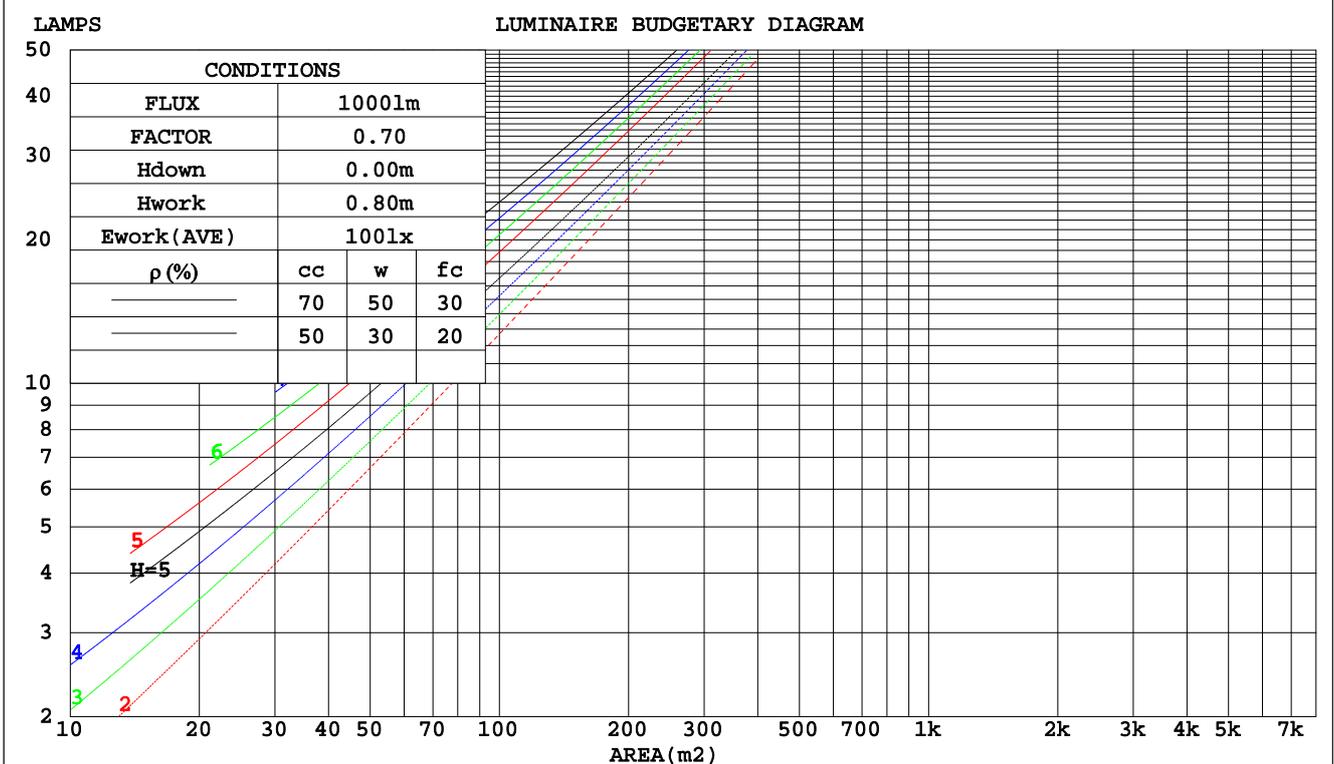
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2023-12-08

$\gamma$  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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.44V I:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 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	1.00	1.00	.98	.97	.97	.95	.94	.92
2.0	1.01	.97	.93	.90	.96	.92	.96	.93	.90	.93	.91	.88	.91	.88	.87	.85
3.0	.94	.88	.84	.92	.87	.83	.90	.85	.82	.87	.84	.81	.85	.82	.79	.78
4.0	.87	.81	.76	.86	.80	.76	.83	.79	.75	.81	.77	.74	.80	.76	.73	.71
5.0	.81	.74	.70	.80	.74	.69	.78	.73	.69	.76	.72	.68	.74	.71	.67	.66
6.0	.75	.68	.64	.74	.68	.64	.73	.67	.63	.71	.66	.63	.70	.66	.62	.61
7.0	.70	.63	.59	.69	.63	.59	.68	.62	.58	.67	.62	.58	.65	.61	.58	.56
8.0	.65	.59	.54	.65	.59	.54	.64	.58	.54	.63	.57	.54	.62	.57	.54	.52
9.0	.61	.55	.51	.61	.55	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.48
10.0	.58	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.55	.50	.47	.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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 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	.192	.109	.035	.186	.106	.034	.173	.099	.032	.161	.093	.030	.151	.087	.028	
2.0	.186	.102	.031	.180	.099	.031	.169	.094	.029	.159	.089	.028	.150	.085	.027	
3.0	.178	.095	.028	.173	.092	.028	.163	.089	.027	.155	.085	.026	.147	.081	.025	
4.0	.169	.088	.026	.165	.086	.026	.157	.083	.025	.150	.080	.024	.143	.078	.024	
5.0	.162	.082	.024	.158	.081	.024	.151	.078	.023	.144	.076	.023	.138	.074	.022	
6.0	.154	.077	.022	.151	.076	.022	.145	.074	.022	.139	.072	.021	.133	.070	.021	
7.0	.147	.073	.021	.144	.072	.020	.139	.070	.020	.133	.068	.020	.129	.067	.020	
8.0	.141	.069	.019	.138	.068	.019	.133	.066	.019	.128	.065	.019	.124	.064	.019	
9.0	.134	.065	.018	.132	.064	.018	.128	.063	.018	.123	.062	.018	.119	.061	.018	
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.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	.086	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.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	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.105	.068	.042	.072	.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	.110	.065	.034	.095	.057	.030	.066	.040	.021	.038	.023	.013	.012	.008	.004	
9.0	.105	.060	.030	.091	.052	.026	.063	.037	.019	.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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 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	20.0	21.1	20.2	21.2	21.4	20.2	21.2	20.4	21.4	21.6
3H	19.9	20.8	20.1	21.0	21.3	20.1	21.0	20.3	21.2	21.4
4H	19.8	20.7	20.1	20.9	21.2	20.0	20.9	20.3	21.1	21.3
6H	19.7	20.6	20.0	20.8	21.1	19.9	20.8	20.2	21.0	21.3
8H	19.7	20.5	20.0	20.8	21.0	19.9	20.7	20.2	20.9	21.2
12H	19.6	20.4	20.0	20.7	21.0	19.8	20.6	20.1	20.9	21.2
4H 2H	19.8	20.7	20.0	20.9	21.1	19.9	20.8	20.2	21.1	21.3
3H	19.7	20.4	20.0	20.7	21.0	19.8	20.6	20.1	20.9	21.2
4H	19.6	20.3	19.9	20.6	20.9	19.8	20.5	20.1	20.8	21.1
6H	19.5	20.1	19.9	20.5	20.8	19.7	20.3	20.1	20.6	21.0
8H	19.5	20.0	19.9	20.4	20.8	19.7	20.2	20.0	20.6	20.9
12H	19.4	19.9	19.8	20.3	20.7	19.6	20.1	20.0	20.5	20.9
8H 4H	19.5	20.0	19.9	20.4	20.8	19.6	20.2	20.0	20.6	20.9
6H	19.4	19.9	19.8	20.3	20.7	19.6	20.0	20.0	20.4	20.9
8H	19.3	19.8	19.8	20.2	20.6	19.5	19.9	20.0	20.4	20.8
12H	19.3	19.7	19.8	20.1	20.6	19.5	19.8	20.0	20.3	20.7
12H 4H	19.4	19.9	19.8	20.3	20.7	19.6	20.1	20.0	20.5	20.9
6H	19.3	19.8	19.8	20.2	20.6	19.5	19.9	20.0	20.4	20.8
8H	19.3	19.7	19.8	20.1	20.6	19.5	19.8	20.0	20.3	20.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 3.2 / - 9.9					+ 3.3 / - 9.8				
1.5H	+ 4.2 / -10.6					+ 3.9 / -10.4				
2.0H	+ 8.1 / - 4.9					+ 8.4 / - 5.5				

CIE Pub.117, 2635 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.4)  
 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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

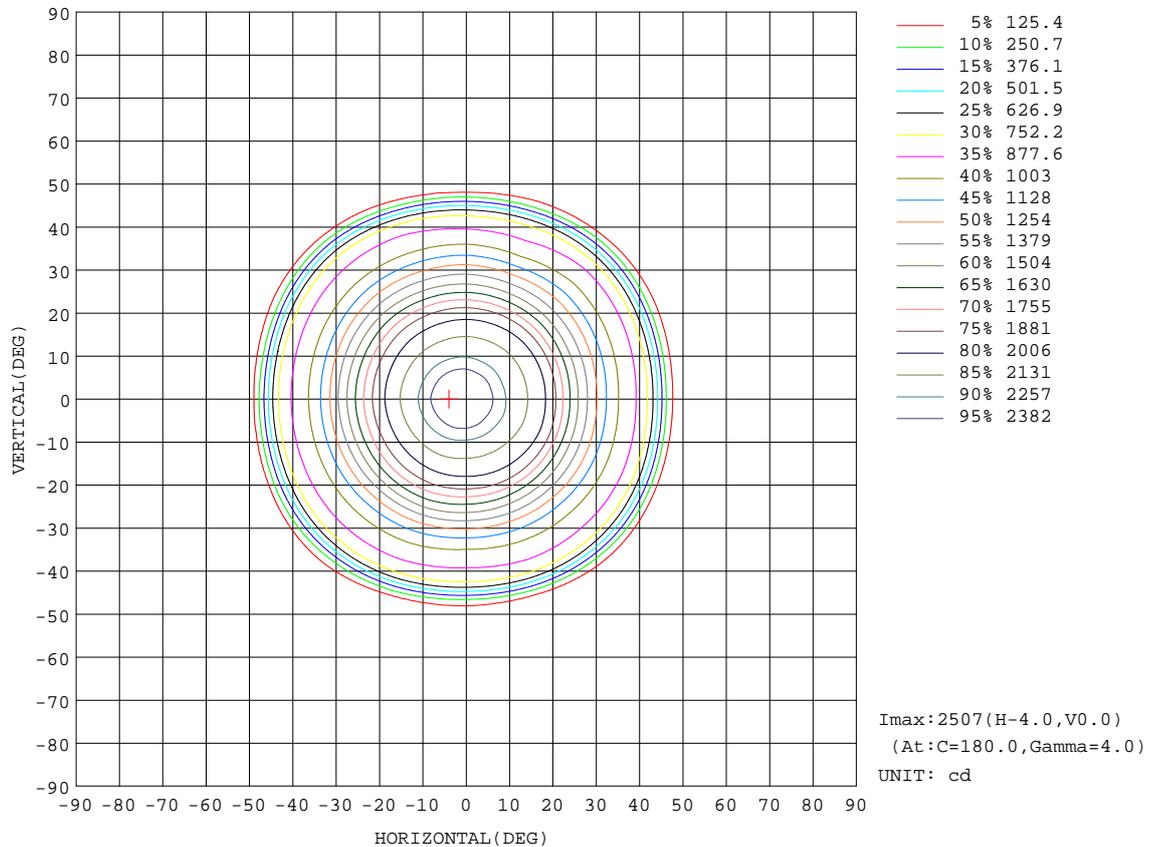
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	82	74	70	81	74	70	80	74	70	65
0.80	90	83	79	89	83	79	88	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	105	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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:



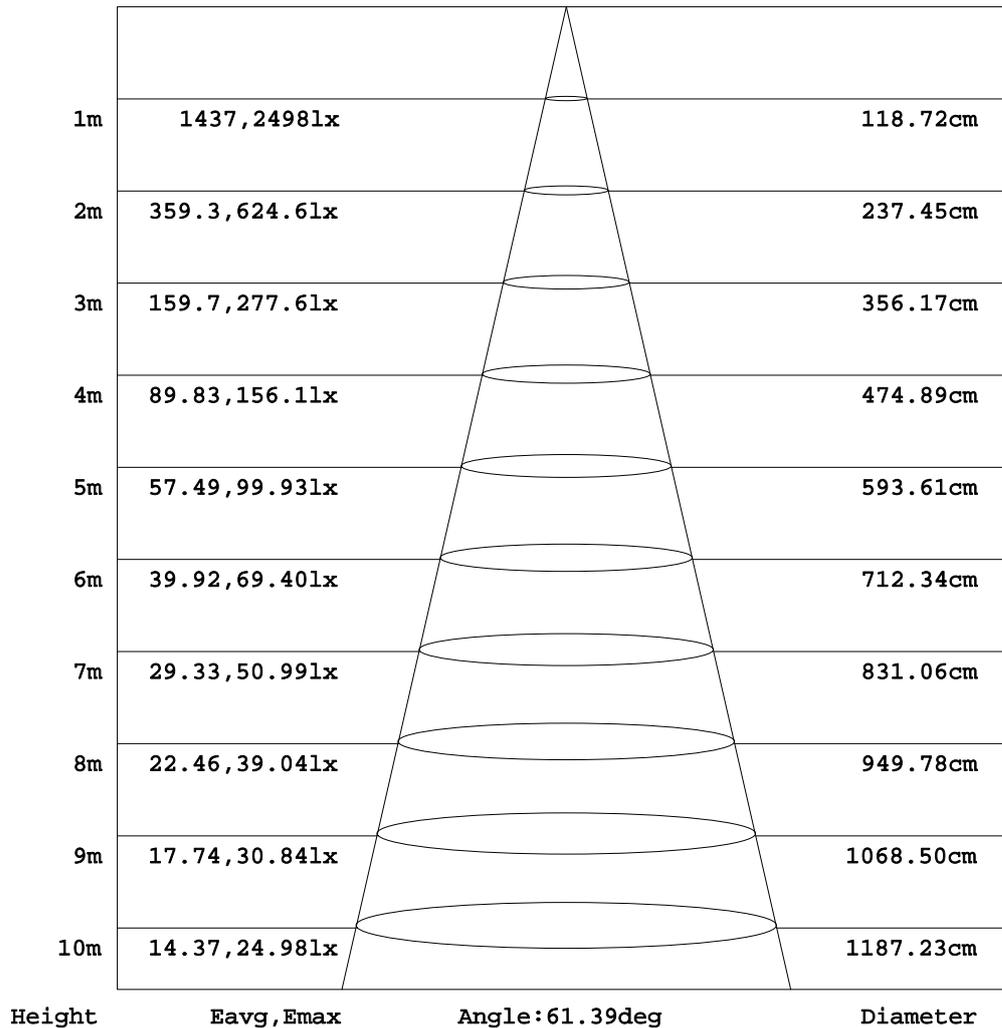
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2023-12-08

$\gamma$  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:

**AAI Figure**

Test:U:220.44V I:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

Flux out:1630 lm



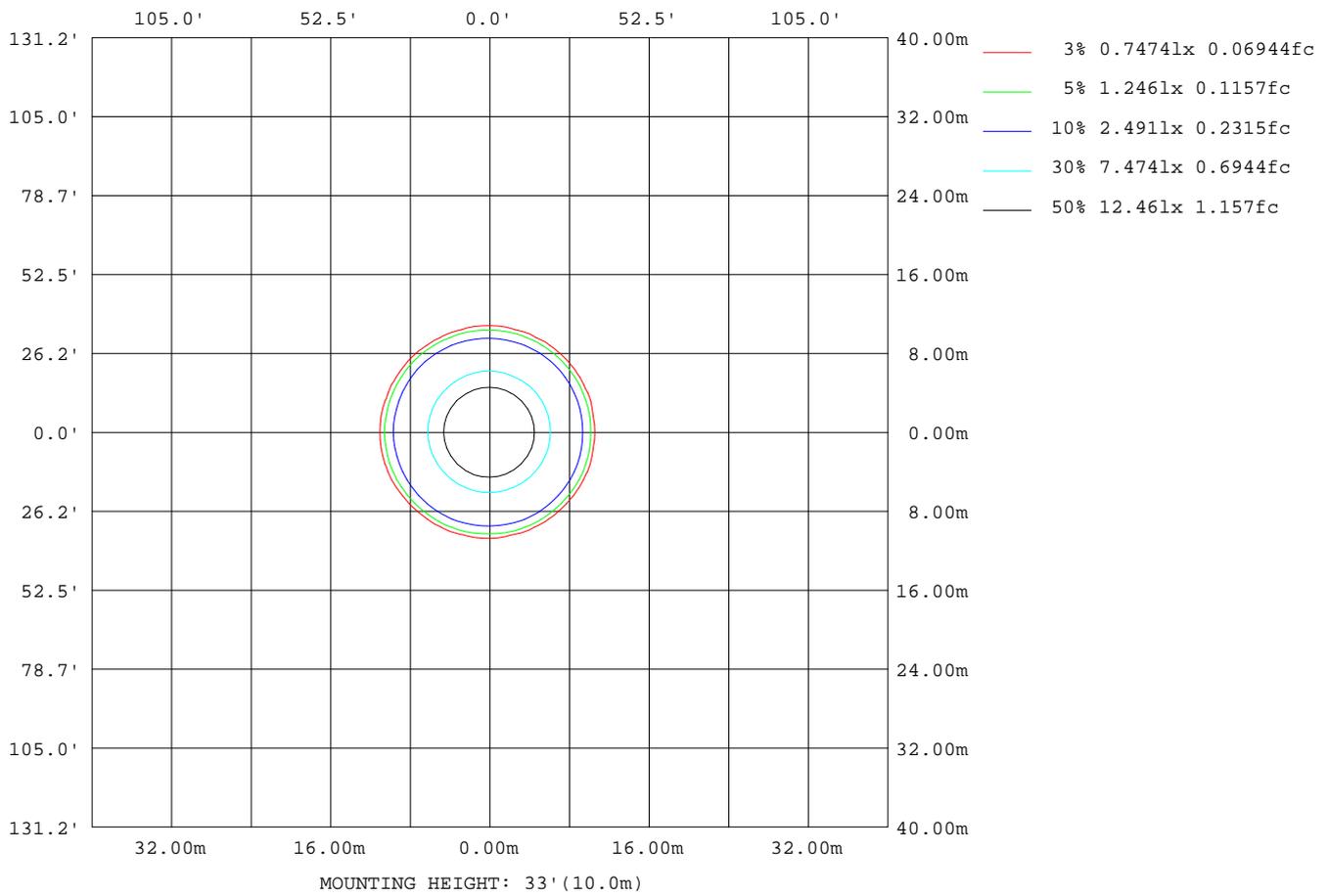
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 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:0.1421A P:30.878W PF:0.9857 Freq:50.01Hz Lamp Flux:2635.08x1 lm		
NAME: DL3082-BKTC30C01P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 100mm	Shielding Angle:

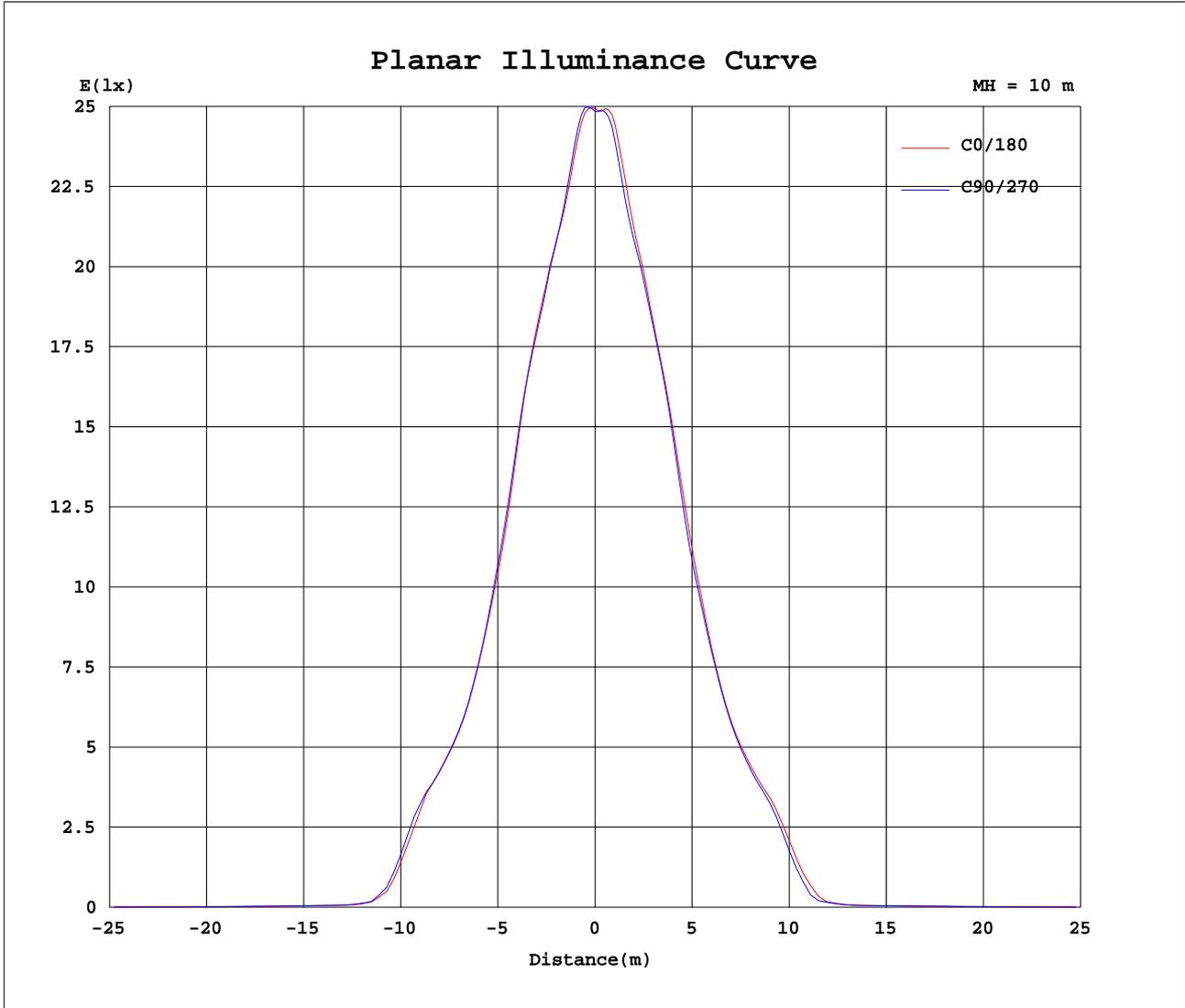
AvgL	cd/m2
L_0~180(65)av	6721
L_0~180(75)av	5256
L_0~180(85)av	2047
L_90~270(65)av	6778
L_90~270(75)av	5261
L_90~270(85)av	1952
L_45(65)av	6638
L_45(75)av	5252
L_45(85)av	1958

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:

