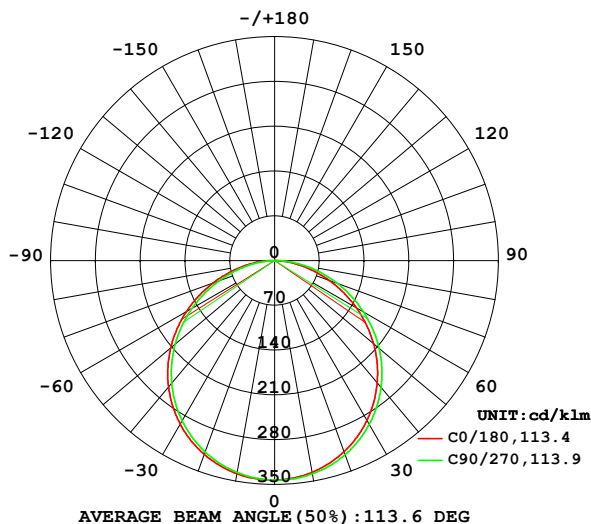


LUMINAIRE PHOTOMETRIC TEST REPORT

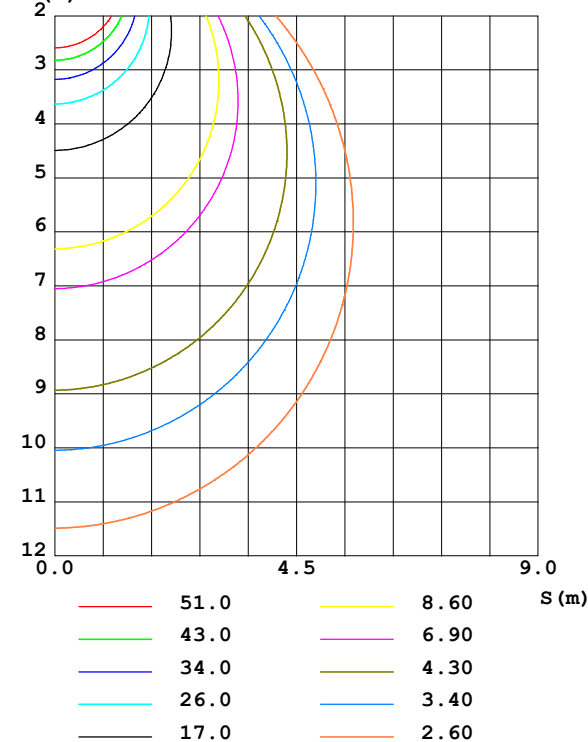
Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 70.46 lm/W
MODEL	LB76313	I _{max} (cd/klm)	343.3	S/MH (C0/180)	1.28	
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	1.25	
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm/klm)	1000.00	η UP,DN (C0-180)	0.0,50.8	
NOMINAL FLUX (lm)	1182.68	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.2	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.35	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx/klm)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators:
Test Date: 2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 10.000m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

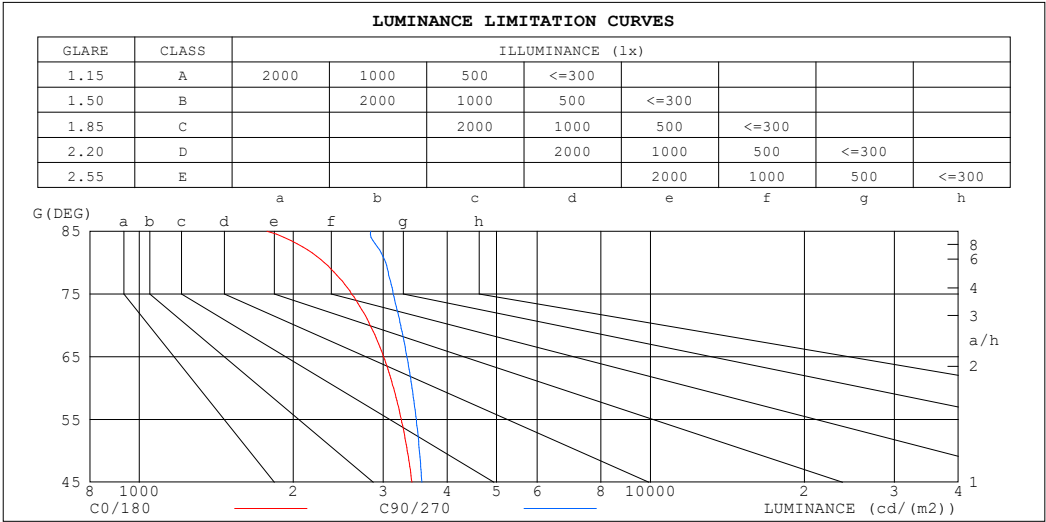
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	336.2	337.3	338.6	338.9	338.5	337.3	336.3	336.0	0- 10	32.48	32.48	3.25,3.25
20	317.8	320.1	322.7	323.5	322.2	320.0	318.2	317.5	10- 20	93.20	125.7	12.6,12.6
30	288.7	291.9	295.8	297.0	295.2	291.8	289.3	288.3	20- 30	141.8	267.4	26.7,26.7
40	249.6	253.8	259.0	260.7	258.2	253.6	250.3	249.2	30- 40	171.7	439.1	43.9,43.9
50	201.9	207.0	213.3	215.4	212.1	206.6	202.9	201.4	40- 50	178.9	618.0	61.8,61.8
60	147.7	153.3	160.5	162.8	159.0	152.8	148.8	147.3	50- 60	162.1	780.1	78,78
70	90.90	96.58	104.3	106.7	102.4	96.06	92.25	90.66	60- 70	124.5	904.6	90.5,90.5
80	37.54	42.56	49.47	51.46	47.89	42.16	38.53	36.93	70- 80	73.76	978.4	97.8,97.8
90	0.8630	0.9569	3.516	4.338	2.747	0.6692	0.6458	0.6810	80- 90	21.64	1000.0	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/klm									UNIT:lm/klm		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1777	2837
80	2301	3032
75	2601	3138
70	2829	3245
65	3004	3338
60	3144	3417
55	3255	3482
50	3343	3532
45	3415	3570

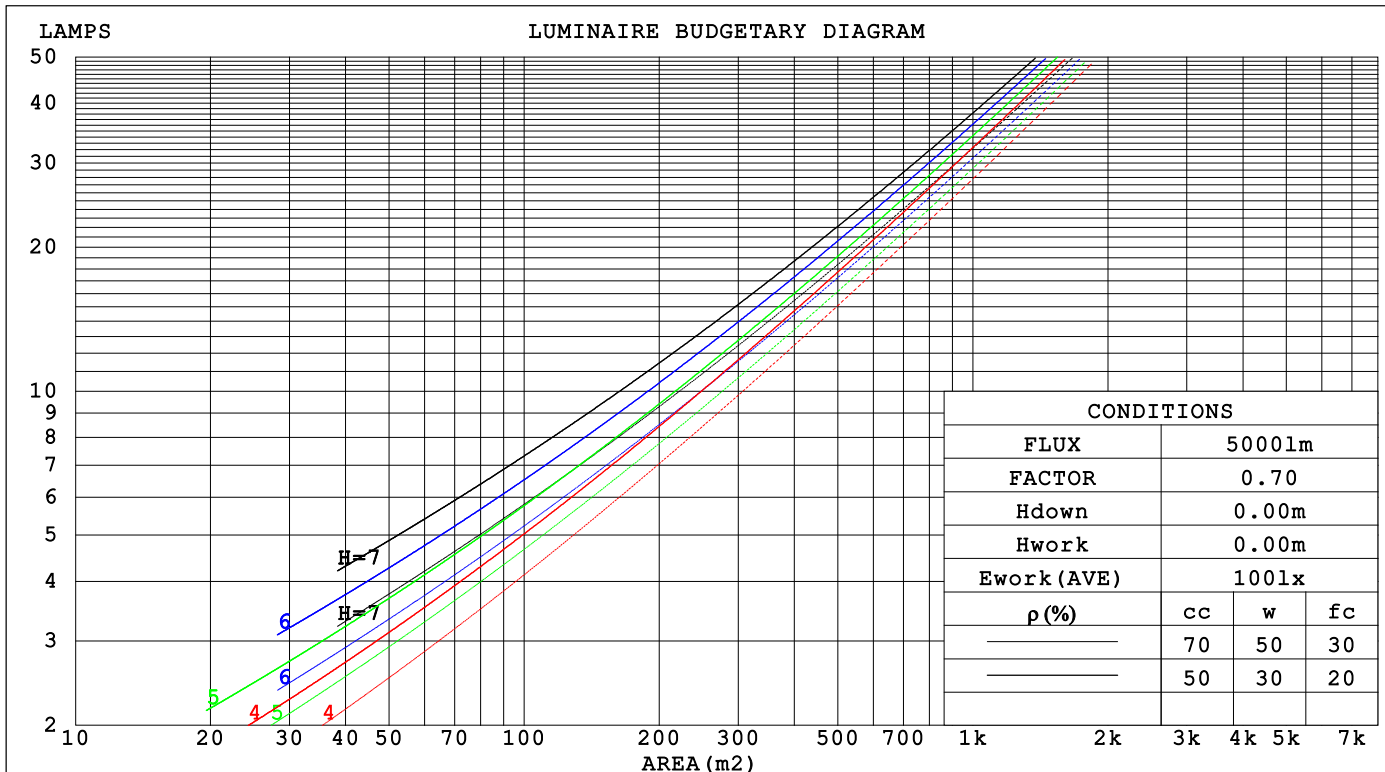
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	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			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	1.04	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.90	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.85	.79	.75	.81	.77	.73	.78	.75	.71	.69
3.0	.79	.71	.64	.77	.70	.63	.74	.68	.62	.72	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.64	.57	.52	.61	.56	.52	.49
5.0	.62	.53	.46	.61	.53	.46	.59	.51	.46	.57	.50	.45	.55	.49	.45	.43
6.0	.56	.47	.41	.55	.47	.40	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.48	.41	.35	.47	.40	.35	.46	.39	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.29	.42	.34	.29	.41	.33	.28	.40	.33	.28	.39	.33	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.315	.179	.057	.308	.176	.056	.295	.169	.054	.283	.163	.052	.271	.157	.051		
2.0	.295	.162	.050	.289	.159	.049	.277	.154	.048	.267	.150	.047	.257	.145	.046		
3.0	.273	.145	.043	.267	.143	.043	.257	.139	.042	.247	.135	.042	.238	.132	.041		
4.0	.251	.131	.038	.246	.129	.038	.237	.126	.038	.229	.123	.037	.221	.120	.037		
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.212	.112	.033	.205	.109	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.104	.030	.197	.102	.030	.191	.100	.030		
7.0	.200	.099	.028	.196	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.162	.081	.023	.157	.080	.023		
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.148	.075	.021		

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	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	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.019	.017	.015		
2.0	.173	.132	.098	.148	.114	.084	.101	.079	.059	.058	.046	.034	.019	.015	.011		
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009		
4.0	.157	.101	.058	.135	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007		
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.010	.006		
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005		
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004		
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003		
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003		
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm										
NAME: LB76313					TYPE:			WEIGHT:		
SPEC.: 4000K					DIM.:			SERIAL No.:		
MFR.: LB					SUR.:			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	16.4	17.9	16.6	18.1	18.3	16.7	18.2	16.9	18.4	18.6
3H	17.8	19.3	18.1	19.5	19.7	18.3	19.7	18.6	19.9	20.2
4H	18.4	19.8	18.7	20.0	20.3	19.0	20.3	19.3	20.6	20.8
6H	18.8	20.1	19.2	20.4	20.7	19.5	20.8	19.9	21.1	21.4
8H	18.9	20.2	19.3	20.5	20.8	19.7	21.0	20.1	21.2	21.5
12H	19.0	20.2	19.4	20.5	20.8	19.9	21.0	20.2	21.3	21.7
4H 2H	17.0	18.4	17.3	18.6	18.9	17.2	18.6	17.6	18.8	19.1
3H	18.7	19.9	19.0	20.2	20.5	19.1	20.2	19.4	20.5	20.8
4H	19.4	20.5	19.8	20.8	21.1	19.9	21.0	20.3	21.3	21.6
6H	19.9	20.9	20.3	21.2	21.6	20.6	21.5	21.0	21.9	22.3
8H	20.1	21.0	20.5	21.4	21.7	20.8	21.7	21.2	22.1	22.5
12H	20.2	21.0	20.6	21.4	21.8	21.0	21.9	21.5	22.2	22.6
8H 4H	19.7	20.6	20.1	21.0	21.3	20.1	21.0	20.5	21.4	21.8
6H	20.4	21.1	20.8	21.5	22.0	21.0	21.7	21.4	22.1	22.6
8H	20.6	21.3	21.1	21.7	22.2	21.3	22.0	21.8	22.4	22.9
12H	20.8	21.4	21.3	21.8	22.3	21.6	22.2	22.1	22.7	23.1
12H 4H	19.7	20.5	20.1	20.9	21.3	20.1	21.0	20.6	21.4	21.8
6H	20.5	21.1	20.9	21.5	22.0	21.0	21.7	21.5	22.1	22.6
8H	20.8	21.3	21.2	21.8	22.3	21.4	22.0	21.9	22.5	22.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1183 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.6$)
Area: 0.111111 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:

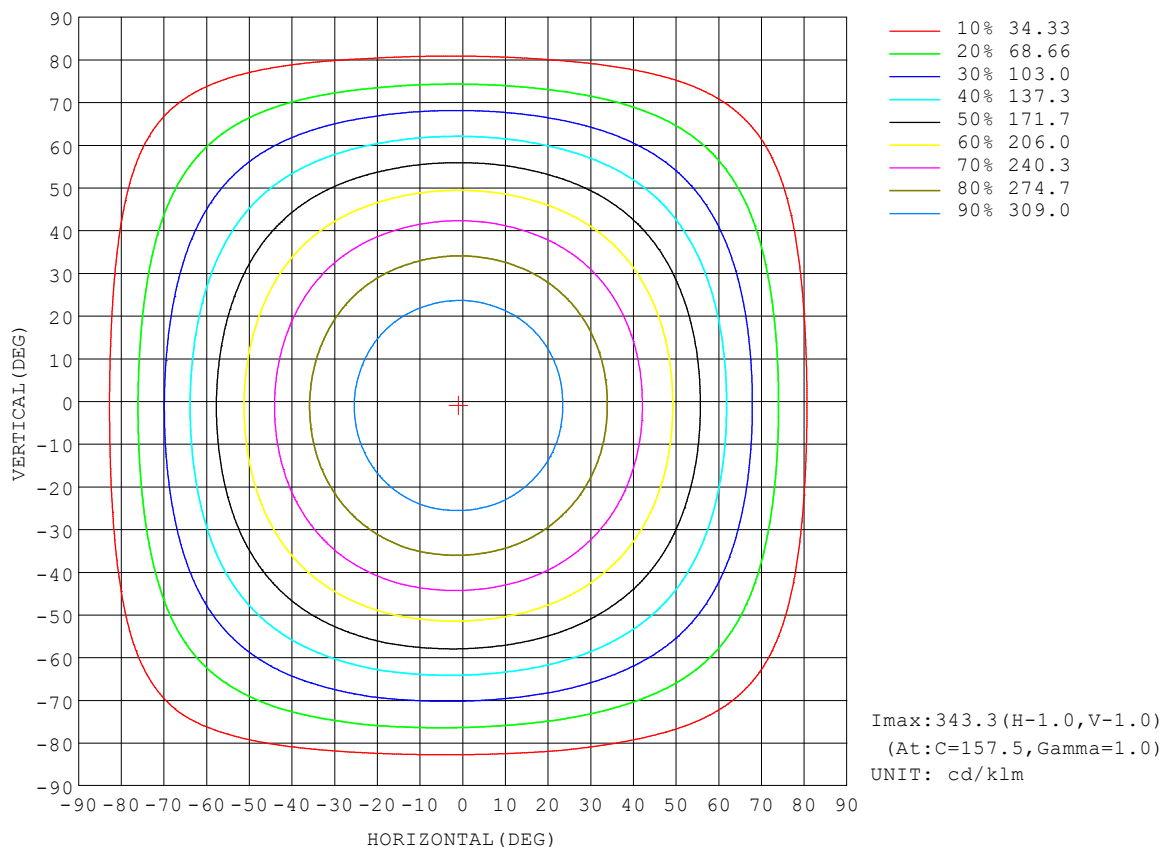
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	45	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	76	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	71	64	78	70	64	56
1.50	88	78	71	86	77	70	83	75	69	61
2.00	95	86	79	93	85	79	89	82	77	69
2.50	99	91	85	96	89	84	93	87	82	73
3.00	102	95	89	100	93	88	96	90	86	78
4.00	106	100	95	104	98	94	99	95	91	82
5.00	108	104	99	106	102	98	101	98	95	86
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: 25.3°C
Operators:
Test Date: 2024-03-15

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 10.000m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:

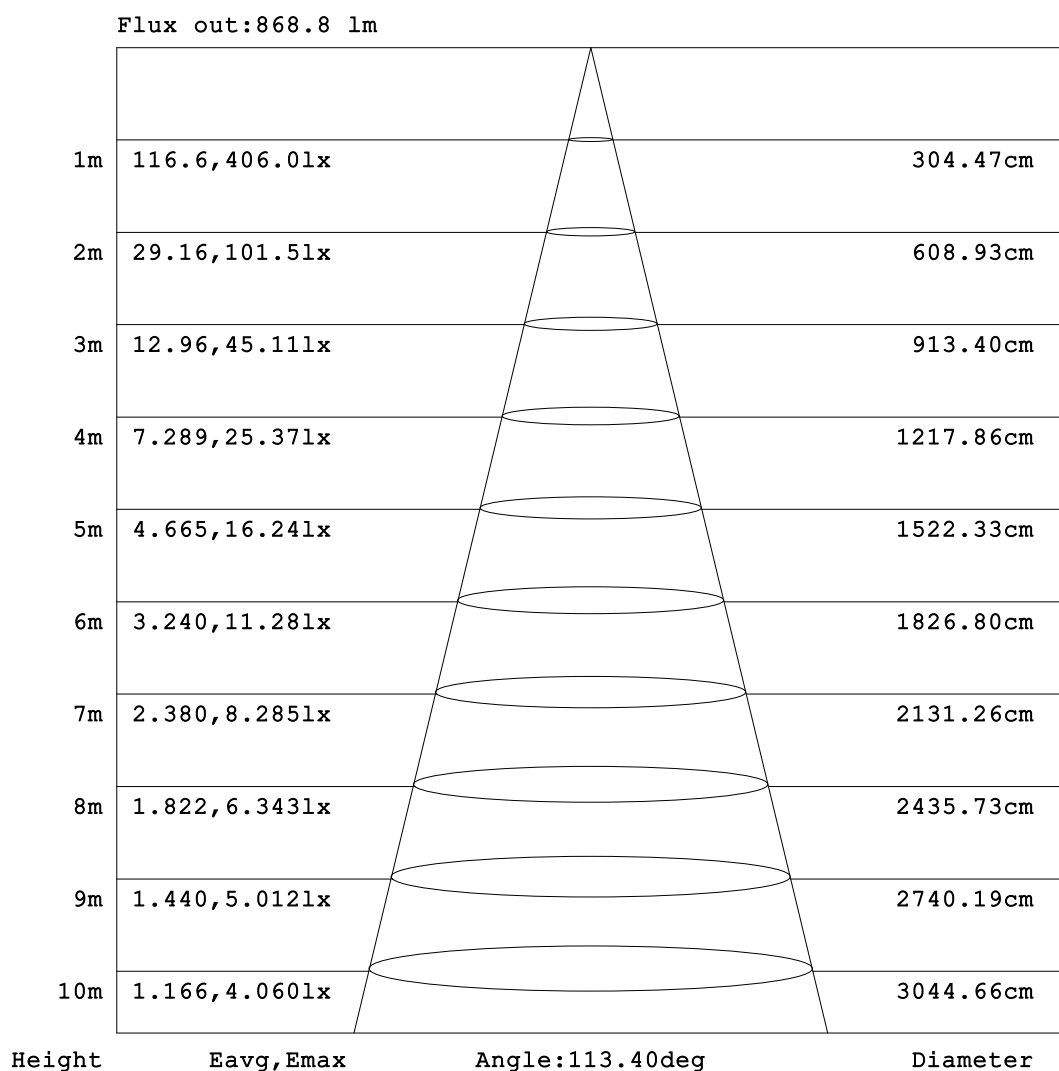


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 10.000m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:



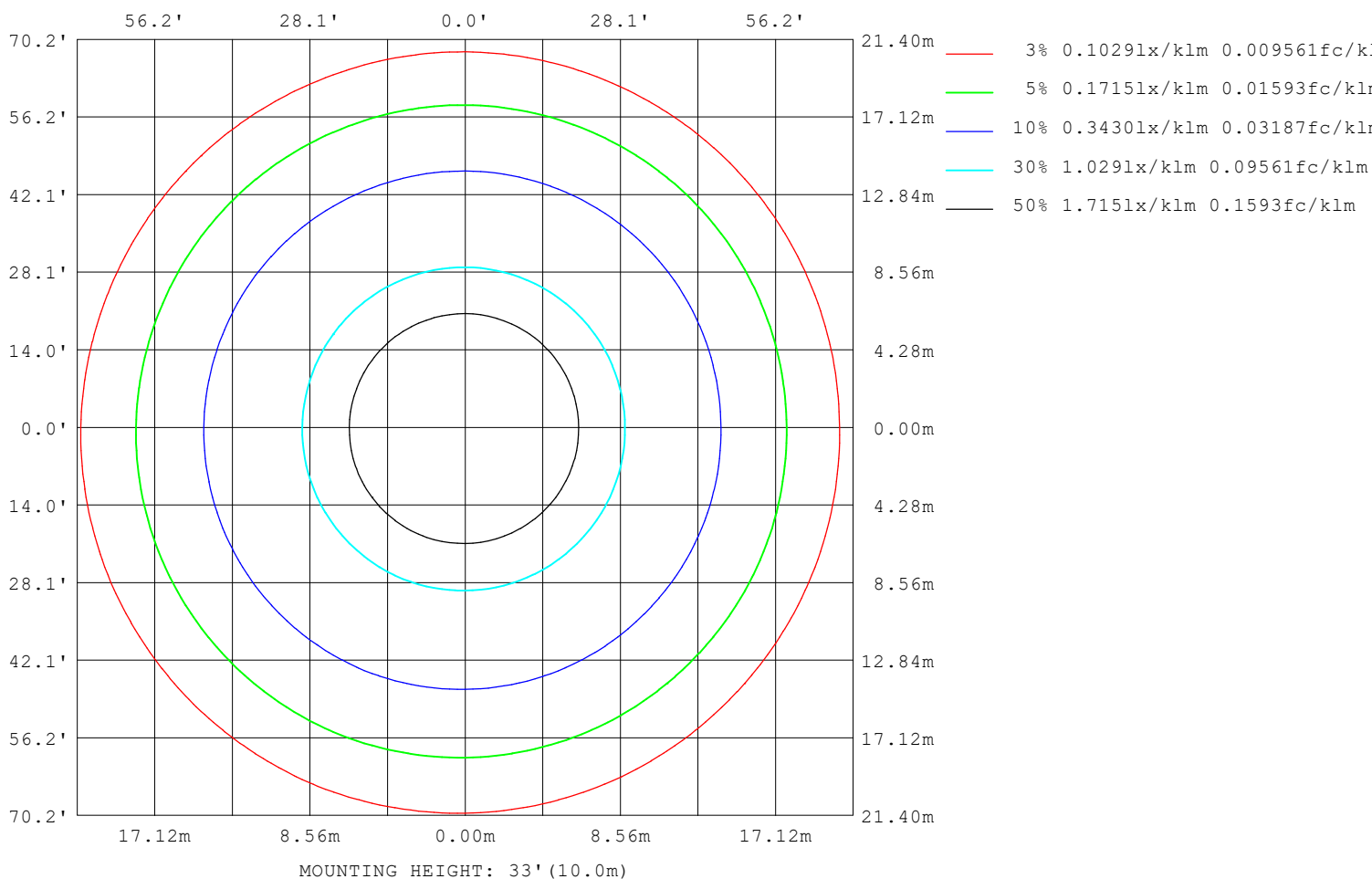
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 10.000m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:

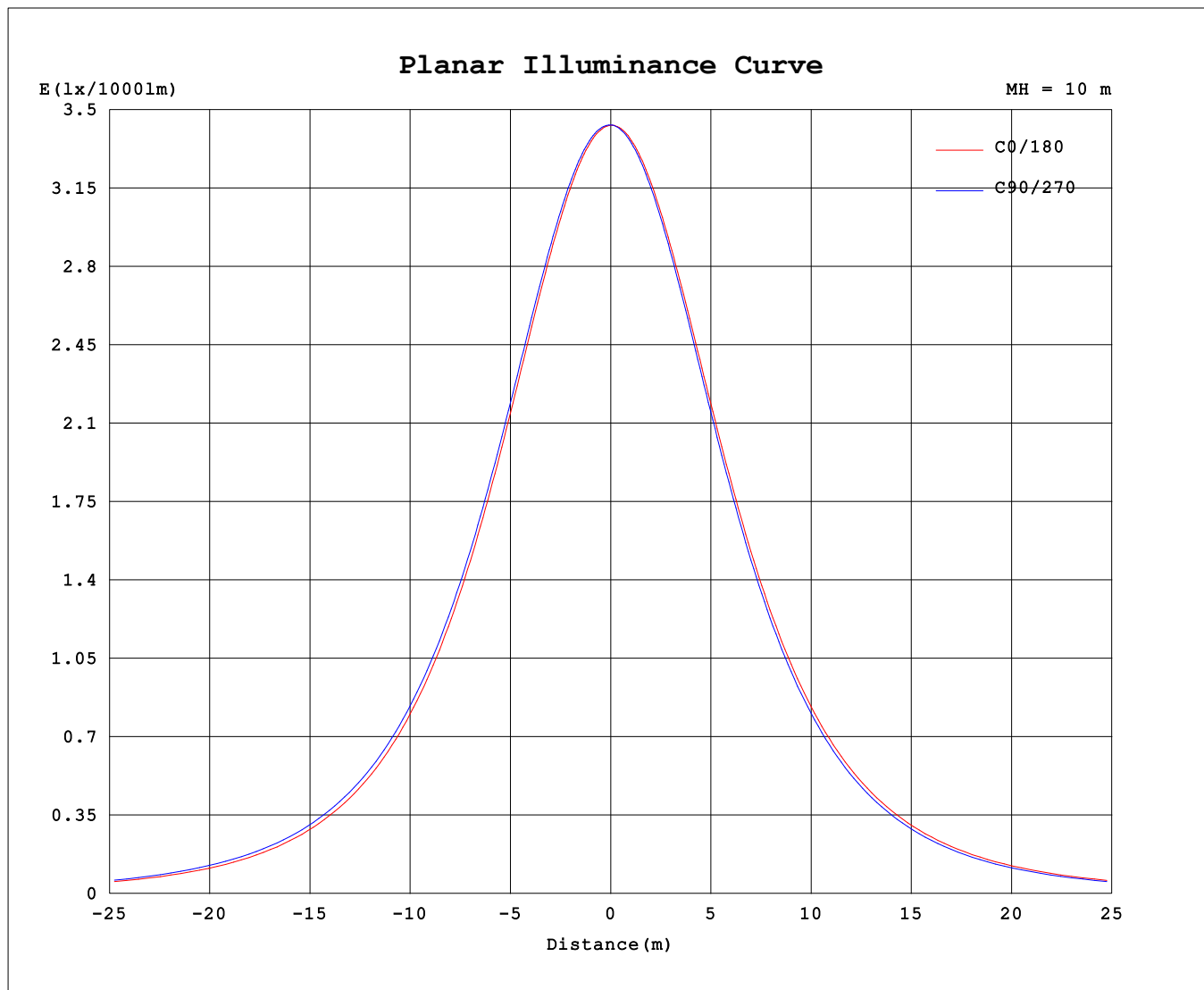
AvgL	cd/m2
L_0~180 (65) av	3150
L_0~180 (75) av	2832
L_0~180 (85) av	2336
L_90~270 (65) av	3187
L_90~270 (75) av	2897
L_90~270 (85) av	2271
L_45 (65) av	3169
L_45 (75) av	2866
L_45 (85) av	2249

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:
Test Date:2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators:
Test Date: 2024-03-15

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity: 65.0%
Test Distance: 10.000m [K=1.0000]
Remarks:

Test:U:120.67V I:0.1534A P:16.786W PF:0.9070 Freq:59.98Hz Lamp Flux:1182.68x1 lm		
NAME: LB76313	TYPE:	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: LB	SUR.:	Shielding Angle:

UNIT: cd/klm

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 2024-03-15

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.479
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

```