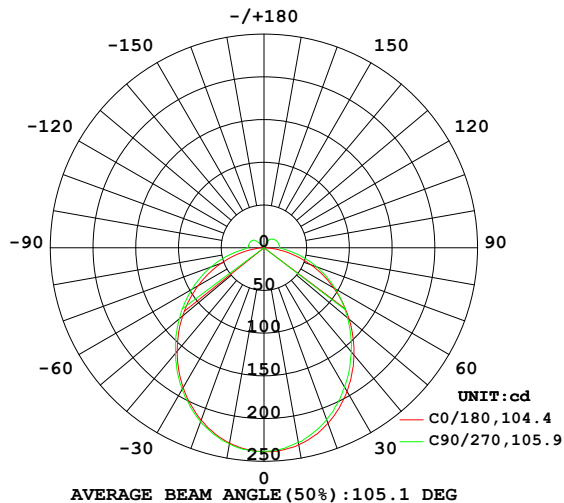


## LUMINAIRE PHOTOMETRIC TEST REPORT

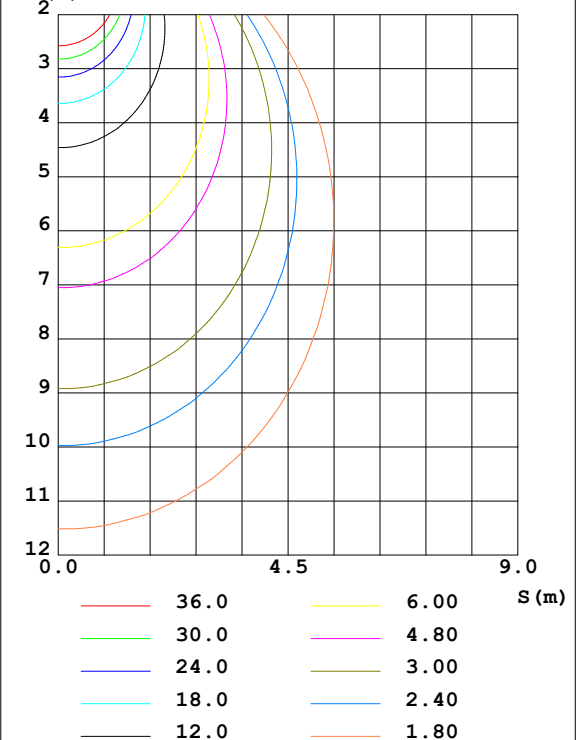
Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 84.78 lm/W			
MODEL		I <sub>max</sub> (cd)	238.8	S/MH (C0/180)	1.19
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.20
RATED VOLTAGE (V)		TOTAL FLUX (lm)	687.76	η UP,DN (C0-180)	3.4,47.2
NOMINAL FLUX (lm)	687.729	CIE CLASS	DIRECT	η UP,DN (C180-360)	2.9,46.4
LAMPS INSIDE	1	η up (%)	6.3	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	93.7	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

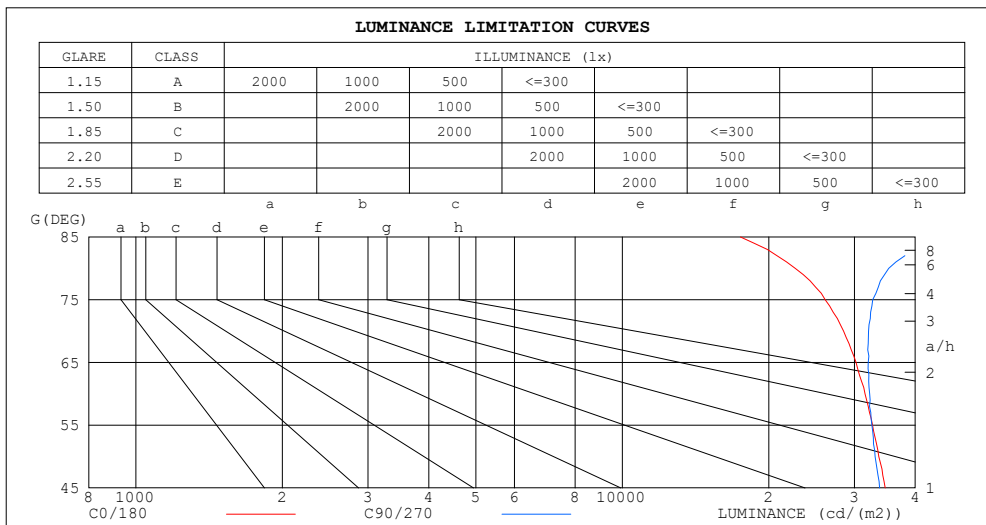
$\gamma$	C0	C90	C180	C270					$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	234.2	231.3	232.0	233.1					0- 10	22.49	22.49	3.27,3.27
20	218.6	214.1	214.8	216.9					10- 20	63.60	86.09	12.5,12.5
30	194.3	188.7	189.1	191.4					20- 30	94.07	180.2	26.2,26.2
40	163.8	159.1	158.2	161.4					30- 40	110.2	290.3	42.2,42.2
50	129.8	127.6	124.4	129.4					40- 50	111.4	401.8	58.4,58.4
60	94.62	96.70	89.14	97.32					50- 60	99.45	501.2	72.9,72.9
70	58.46	65.82	53.42	66.23					60- 70	76.92	578.2	84.1,84.1
80	23.62	36.77	19.38	36.70					70- 80	47.21	625.4	90.9,90.9
90	0.6870	18.51	0.3078	19.11					80- 90	18.89	644.2	93.7,93.7
100	0.2263	18.09	0.3079	18.25					90-100	10.18	654.4	95.2,95.2
110	0.3201	17.70	0.4312	17.75					100-110	9.681	664.1	96.6,96.6
120	0.4308	16.69	0.5789	16.49					110-120	8.761	672.9	97.8,97.8
130	0.5665	15.29	0.7145	13.06					120-130	7.304	680.2	98.9,98.9
140	0.7143	13.15	0.8377	0.8049					130-140	4.282	684.5	99.5,99.5
150	0.8251	8.658	0.9485	0.8128					140-150	2.228	686.7	99.8,99.8
160	0.9483	1.047	1.067	0.9385					150-160	0.6728	687.4	99.9,99.9
170	1.010	1.121	1.131	1.022					160-170	0.2924	687.6	100,100
180	1.133	1.158	1.145	1.158					170-180	0.1056	687.8	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17488	48126
80	22672	35289
75	26128	32719
70	28490	32072
65	30242	32024
60	31542	32234
55	32693	32577
50	33668	33089
45	34691	33785

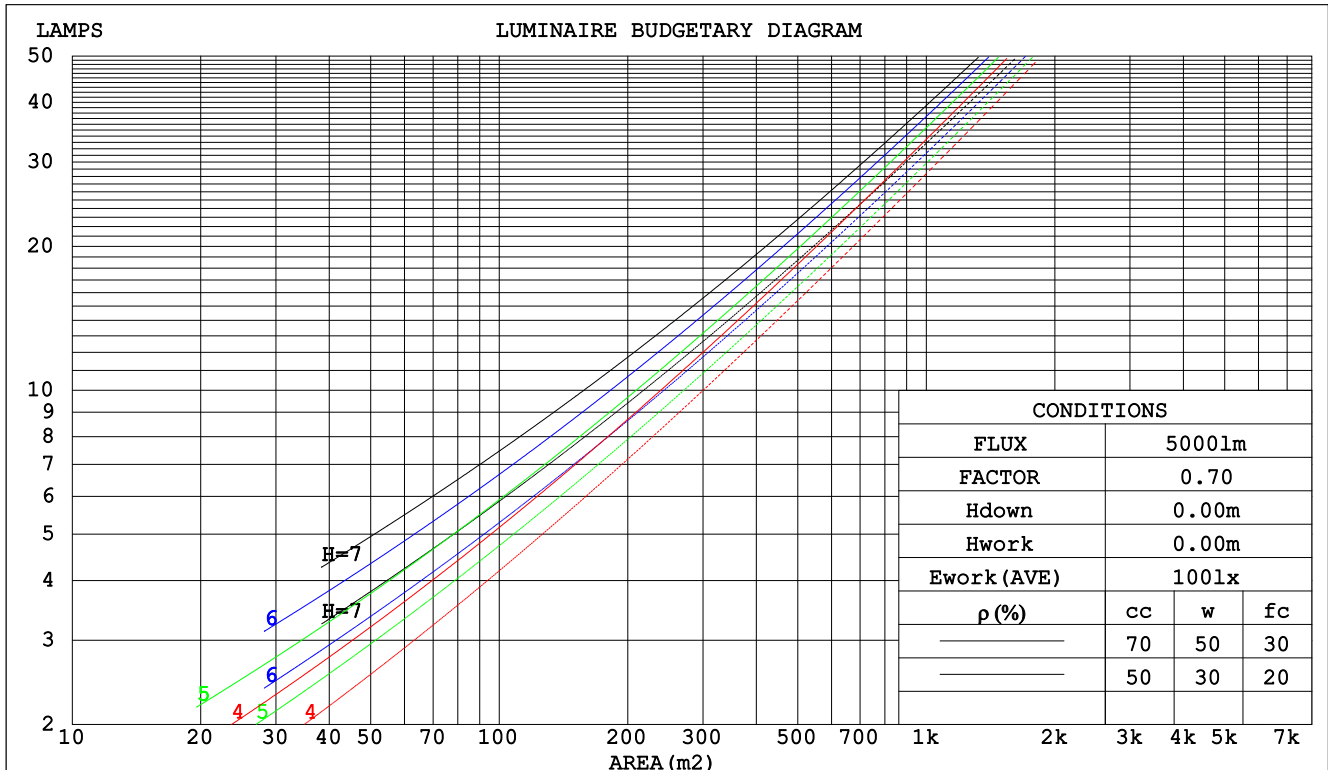
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	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															



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz		
Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	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 Coeffcients(WEC)										
0.0																	
1.0	.316	.180	.057	.307	.175	.056	.290	.166	.053	.274	.158	.051	.260	.151	.049		
2.0	.292	.160	.049	.284	.157	.048	.269	.150	.046	.255	.143	.045	.243	.137	.043		
3.0	.269	.143	.043	.261	.140	.042	.248	.134	.041	.236	.129	.040	.224	.124	.038		
4.0	.247	.128	.038	.241	.126	.037	.229	.121	.036	.217	.117	.035	.207	.112	.034		
5.0	.228	.116	.034	.222	.114	.033	.211	.110	.032	.201	.106	.032	.192	.103	.031		
6.0	.211	.106	.030	.206	.104	.030	.196	.101	.029	.187	.097	.029	.179	.094	.028		
7.0	.196	.097	.028	.192	.095	.027	.183	.092	.027	.175	.090	.026	.167	.087	.025		
8.0	.183	.090	.025	.179	.088	.025	.171	.085	.024	.164	.083	.024	.156	.080	.023		
9.0	.172	.083	.023	.168	.082	.023	.161	.079	.023	.154	.077	.022	.147	.075	.022		
10.0	.161	.077	.021	.158	.076	.021	.151	.074	.021	.145	.072	.020	.139	.070	.020		

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	.239	.239	.239	.204	.204	.204	.139	.139	.139	.080	.080	.080	.026	.026	.026	
1.0	.229	.205	.182	.196	.176	.157	.134	.121	.109	.077	.070	.063	.025	.023	.020	
2.0	.221	.181	.147	.189	.156	.127	.130	.108	.089	.075	.063	.052	.024	.020	.017	
3.0	.213	.163	.124	.183	.141	.107	.126	.098	.075	.073	.057	.044	.023	.019	.015	
4.0	.206	.150	.108	.177	.130	.094	.121	.091	.066	.070	.053	.039	.023	.017	.013	
5.0	.198	.140	.097	.170	.121	.084	.117	.085	.060	.068	.050	.035	.022	.016	.012	
6.0	.191	.132	.089	.164	.114	.078	.113	.080	.055	.066	.047	.033	.021	.015	.011	
7.0	.184	.125	.083	.159	.108	.073	.110	.076	.051	.064	.045	.031	.021	.015	.010	
8.0	.178	.119	.079	.153	.103	.069	.106	.073	.049	.062	.043	.029	.020	.014	.010	
9.0	.172	.114	.075	.148	.099	.066	.103	.070	.047	.060	.041	.028	.019	.014	.009	
10.0	.166	.110	.073	.143	.096	.063	.099	.067	.045	.058	.040	.027	.019	.013	.009	

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz											
Lamp Flux:687.729x1 lm											
NAME: RIBDC-23-35K-AM					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: RAYHIL					SUR.: 0.01*0.6			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	25.8	27.3	26.2	27.6	27.9	25.9	27.3	26.2	27.6	27.9	
	3H	27.3	28.6	27.7	29.0	29.3	27.6	28.9	27.9	29.2	29.6
	4H	27.9	29.2	28.3	29.5	29.9	28.3	29.6	28.7	29.9	30.3
	6H	28.3	29.5	28.7	29.9	30.3	29.0	30.2	29.5	30.6	31.0
	8H	28.4	29.6	28.9	30.0	30.4	29.4	30.5	29.8	30.9	31.3
	12H	28.5	29.6	28.9	30.0	30.4	29.7	30.8	30.1	31.2	31.6
4H	2H	26.4	27.7	26.8	28.0	28.4	26.5	27.7	26.9	28.1	28.5
	3H	28.1	29.2	28.6	29.6	30.1	28.3	29.4	28.8	29.8	30.3
	4H	28.8	29.8	29.3	30.3	30.7	29.2	30.2	29.7	30.7	31.1
	6H	29.4	30.3	29.9	30.7	31.2	30.1	31.0	30.6	31.4	31.9
	8H	29.6	30.4	30.1	30.9	31.4	30.5	31.3	31.0	31.8	32.3
	12H	29.7	30.4	30.2	30.9	31.4	30.9	31.7	31.5	32.2	32.7
8H	4H	29.2	30.0	29.7	30.5	31.0	29.5	30.3	30.0	30.8	31.3
	6H	29.9	30.6	30.4	31.1	31.6	30.6	31.2	31.1	31.8	32.3
	8H	30.1	30.8	30.7	31.3	31.9	31.1	31.7	31.6	32.2	32.8
	12H	30.3	30.9	30.9	31.4	32.0	31.7	32.2	32.2	32.7	33.4
12H	4H	29.2	30.0	29.7	30.5	31.0	29.5	30.3	30.1	30.8	31.3
	6H	30.0	30.6	30.5	31.1	31.7	30.6	31.2	31.2	31.8	32.3
	8H	30.3	30.8	30.9	31.4	32.0	31.2	31.7	31.8	32.3	32.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3					

CIE Pub.117, 687.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.3)  
Area: 0.006 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:

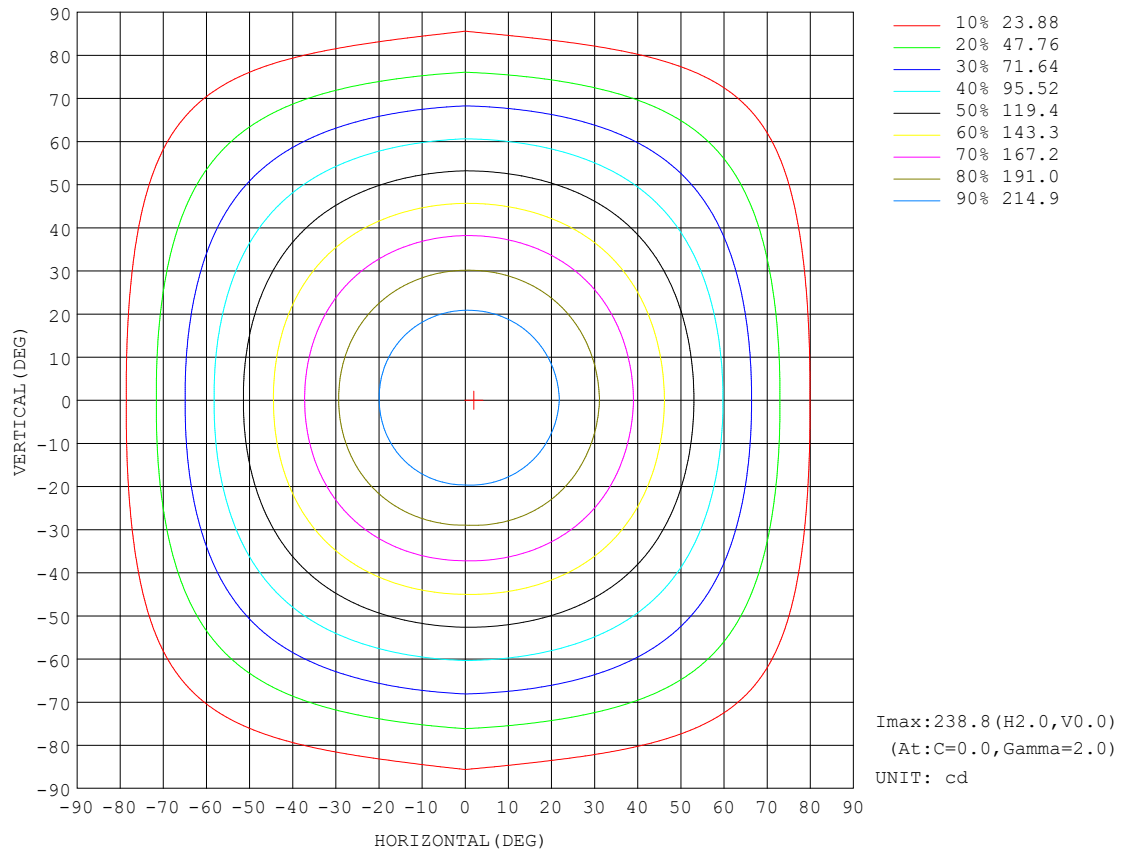
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT)    k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	31
0.80	66	54	47	64	53	46	62	52	46	39
1.00	74	63	55	72	62	55	70	63	54	46
1.25	81	70	63	79	69	62	76	67	61	53
1.50	86	76	68	84	74	68	80	72	66	58
2.00	93	84	77	90	82	76	86	79	74	65
2.50	97	88	82	94	87	81	89	83	78	69
3.00	100	93	87	97	91	85	92	87	83	72
4.00	104	98	93	101	96	91	96	91	88	77
5.00	106	101	97	103	99	95	98	94	91	80
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNM = 1.25		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:



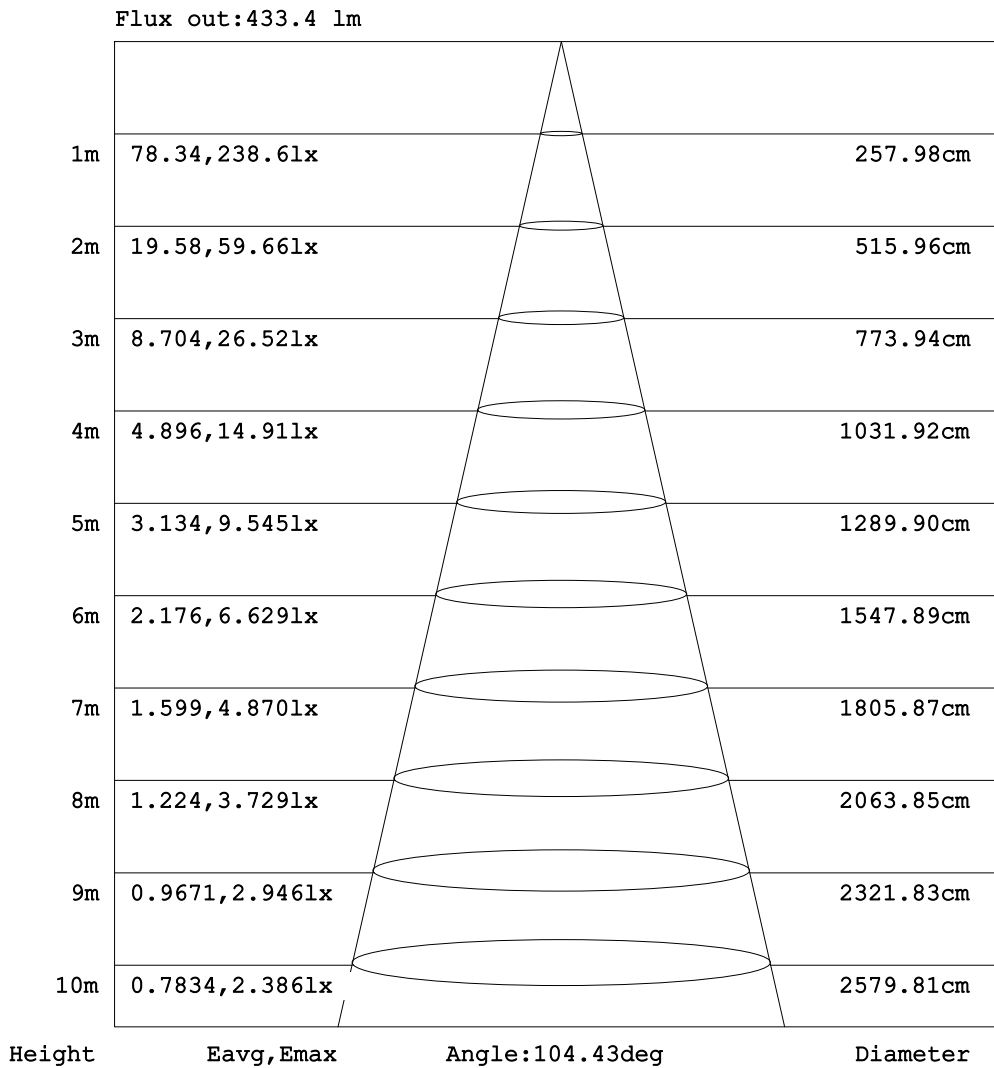
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:



AAI Figure

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:



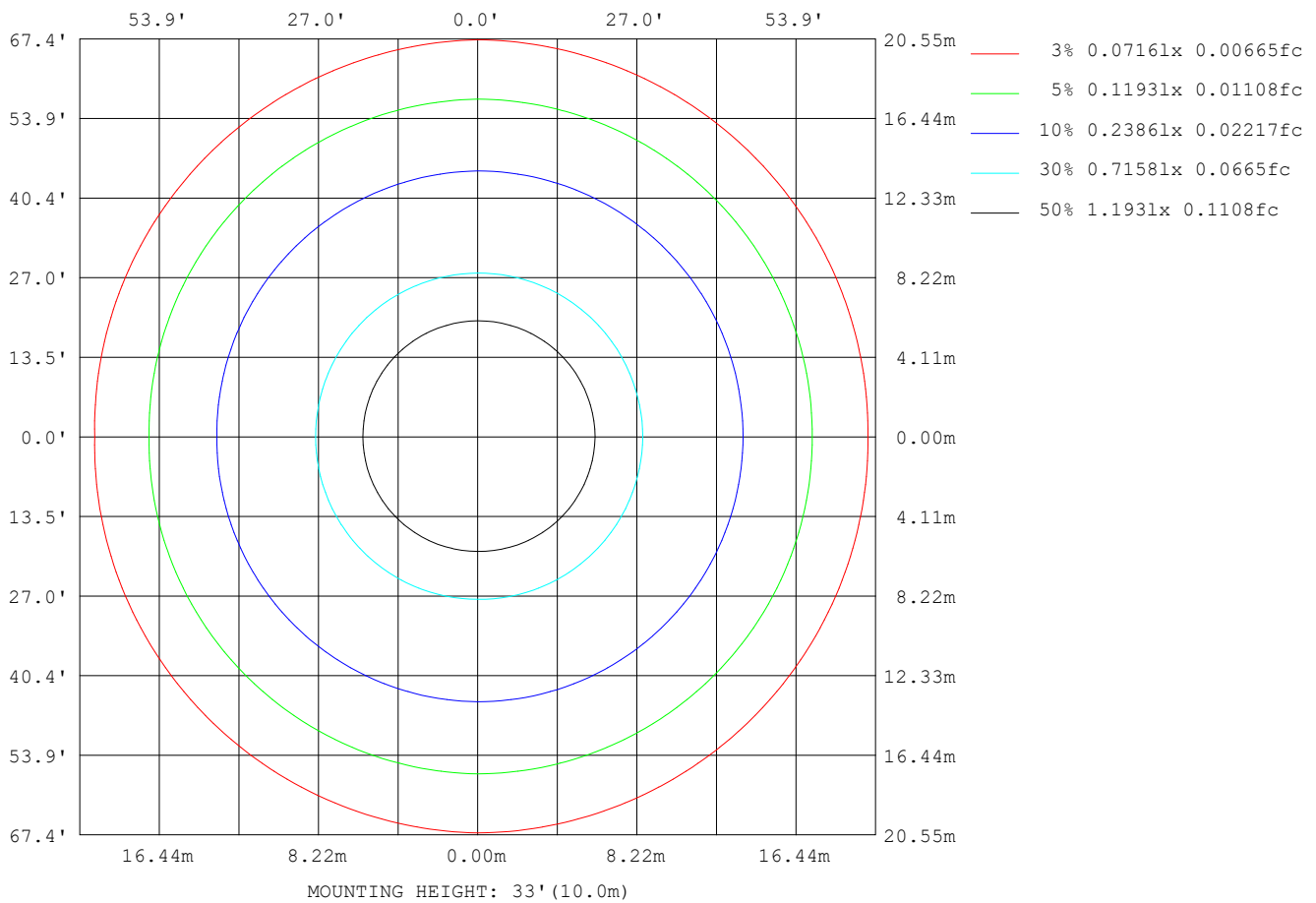
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:

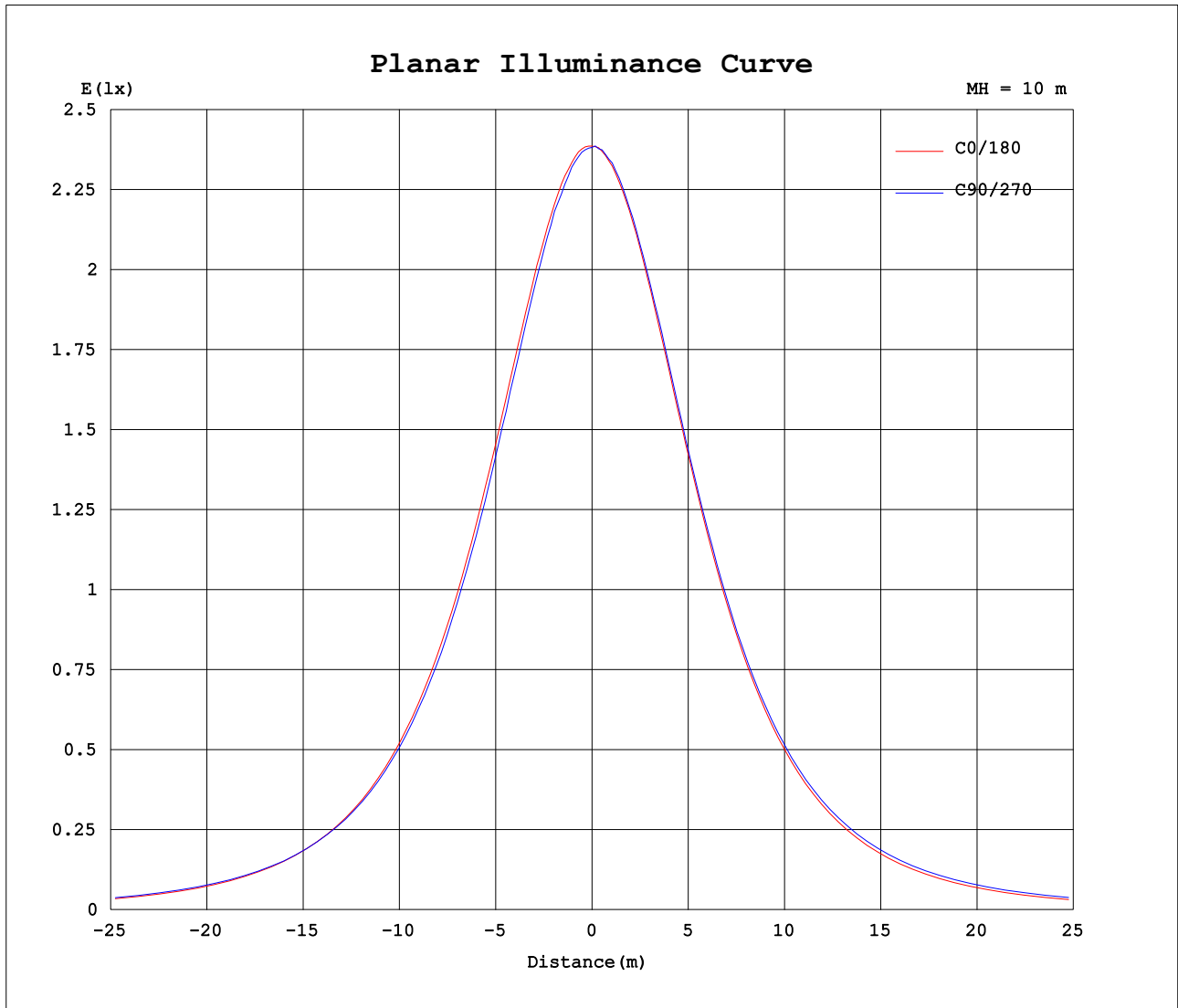
AvgL	cd/m2
L_0~180 (65) av	29189
L_0~180 (75) av	24620
L_0~180 (85) av	14573
L_90~270 (65) av	32114
L_90~270 (75) av	32735
L_90~270 (85) av	47905
L_45 (65) av	30952
L_45 (75) av	29598
L_45 (85) av	35223

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: JZ  
 Test Date: 2023-08-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
 Humidity: 65.0%  
 Test Distance: 8.700m [K=1.0000]  
 Remarks:

### LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.001V I:0.3380A P:8.1123W PF:1.0000 Freq:0Hz Lamp Flux:687.729x1 lm		
NAME: RIBDC-23-35K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.6	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	239	238	239	238														
5	238	236	237	237														
10	234	231	232	233														
15	228	224	225	226														
20	219	214	215	217														
25	208	202	203	205														
30	194	189	189	191														
35	179	174	174	177														
40	164	159	158	161														
45	147	143	142	146														
50	130	128	124	129														
55	113	112	107	113														
60	94.6	96.7	89.1	97.3														
65	76.7	81.2	71.3	81.7														
70	58.5	65.8	53.4	66.2														
75	40.6	50.8	35.9	50.9														
80	23.6	36.8	19.4	36.7														
85	9.15	25.2	6.10	24.9														
90	0.69	18.5	0.31	19.1														
95	0.23	18.3	0.25	18.4														
100	0.23	18.1	0.31	18.3														
105	0.27	17.9	0.37	18.1														
110	0.32	17.7	0.43	17.7														
115	0.37	17.2	0.49	17.3														
120	0.43	16.7	0.58	16.5														
125	0.55	16.1	0.65	15.5														
130	0.57	15.3	0.71	13.1														
135	0.64	14.3	0.78	6.36														
140	0.71	13.2	0.84	0.80														
145	0.78	11.9	0.90	0.80														
150	0.83	8.66	0.95	0.81														
155	0.92	1.31	1.02	0.90														
160	0.95	1.05	1.07	0.94														
165	0.98	1.08	1.10	0.99														
170	1.01	1.12	1.13	1.02														
175	1.10	1.15	1.14	1.12														
180	1.13	1.16	1.15	1.16														

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
γ Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.444  
Humidity:65.0%  
Test Distance:8.700m [K=1.0000]  
Remarks: