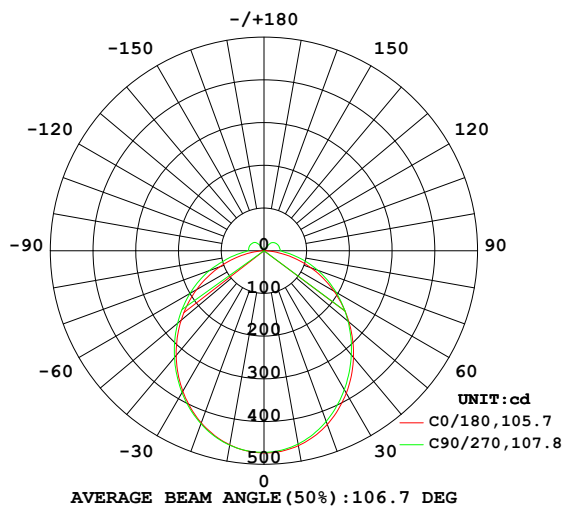


## LUMINAIRE PHOTOMETRIC TEST REPORT

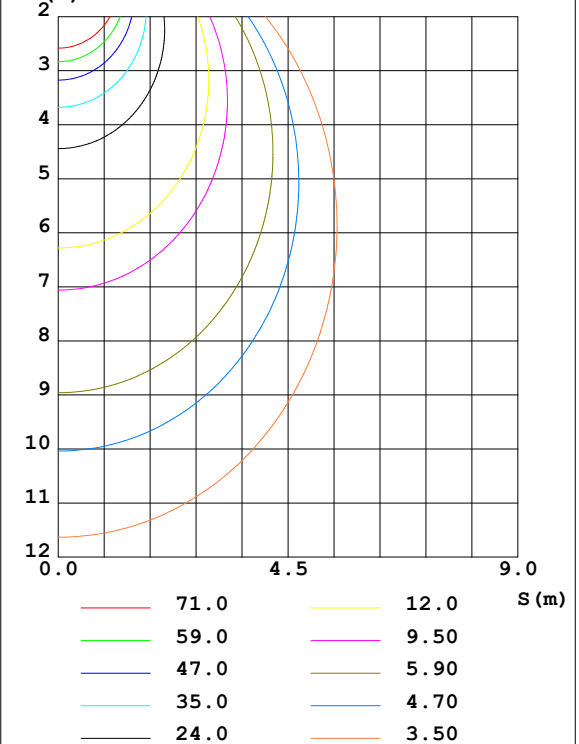
Test:U:24.001V I:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 85.11 lm/W			
MODEL		I <sub>max</sub> (cd)	473.4	S/MH (C0/180)	1.20
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)		TOTAL FLUX (lm)	1387.5	η UP,DN (C0-180)	3.3,46.9
NOMINAL FLUX (lm)	1387.47	CIE CLASS	DIRECT	η UP,DN (C180-360)	3.2,46.6
LAMPS INSIDE	1	η up (%)	6.5	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	93.5	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:2023-08-09

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:

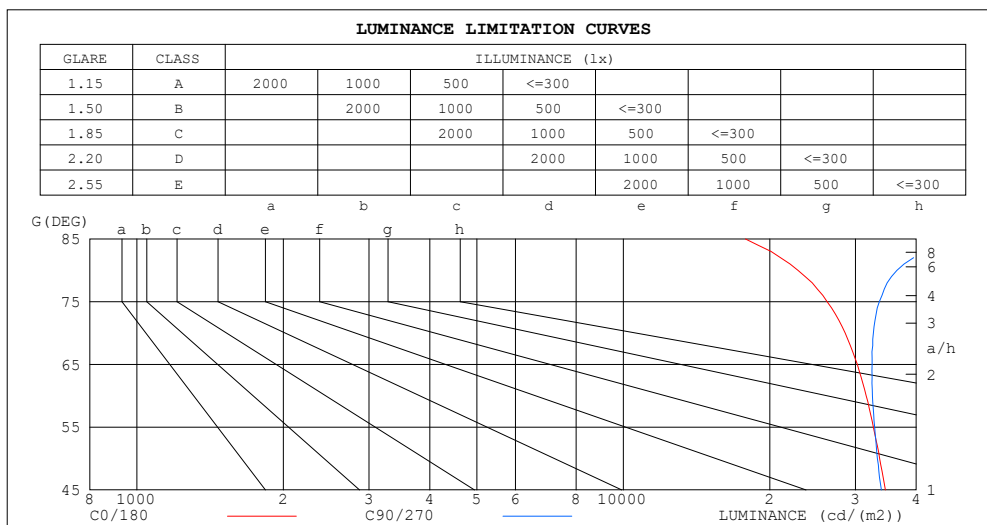
$\gamma$	C0	C90	C180	C270					$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	463.4	459.4	461.3	462.2					0- 10	44.59	44.59	3.21,3.21
20	432.9	425.5	428.9	431.2					10- 20	126.3	170.9	12.3,12.3
30	385.2	375.8	380.0	383.8					20- 30	187.5	358.3	25.8,25.8
40	326.0	318.1	319.7	326.2					30- 40	220.7	579.0	41.7,41.7
50	259.6	256.7	253.1	263.8					40- 50	224.4	803.4	57.9,57.9
60	189.4	195.1	182.4	200.5					50- 60	201.5	1005	72.4,72.4
70	117.3	134.0	110.0	136.5					60- 70	156.5	1161	83.7,83.7
80	47.65	76.06	40.76	74.86					70- 80	96.22	1258	90.6,90.6
90	1.806	39.25	0.8108	37.92					80- 90	39.06	1297	93.5,93.5
100	0.6800	37.29	0.6775	36.26					90-100	20.75	1317	95,95
110	0.8123	36.18	0.8750	35.62					100-110	19.67	1337	96.4,96.4
120	1.046	33.73	1.170	33.64					110-120	17.81	1355	97.7,97.7
130	1.342	29.95	1.417	30.46					120-130	14.95	1370	98.7,98.7
140	1.574	22.42	1.663	20.72					130-140	11.01	1381	99.5,99.5
150	1.785	2.795	1.860	4.455					140-150	4.589	1385	99.9,99.9
160	1.983	2.500	2.082	2.845					150-160	1.120	1387	99.9,99.9
170	2.119	2.254	2.206	2.439					160-170	0.6551	1387	100,100
180	2.205	2.192	2.217	2.266					170-180	0.2132	1387	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:2023-08-09

$\gamma$  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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17829	50176
80	22866	36500
75	26236	33591
70	28577	32660
65	30278	32461
60	31570	32516
55	32668	32853
50	33651	33284
45	34568	33921

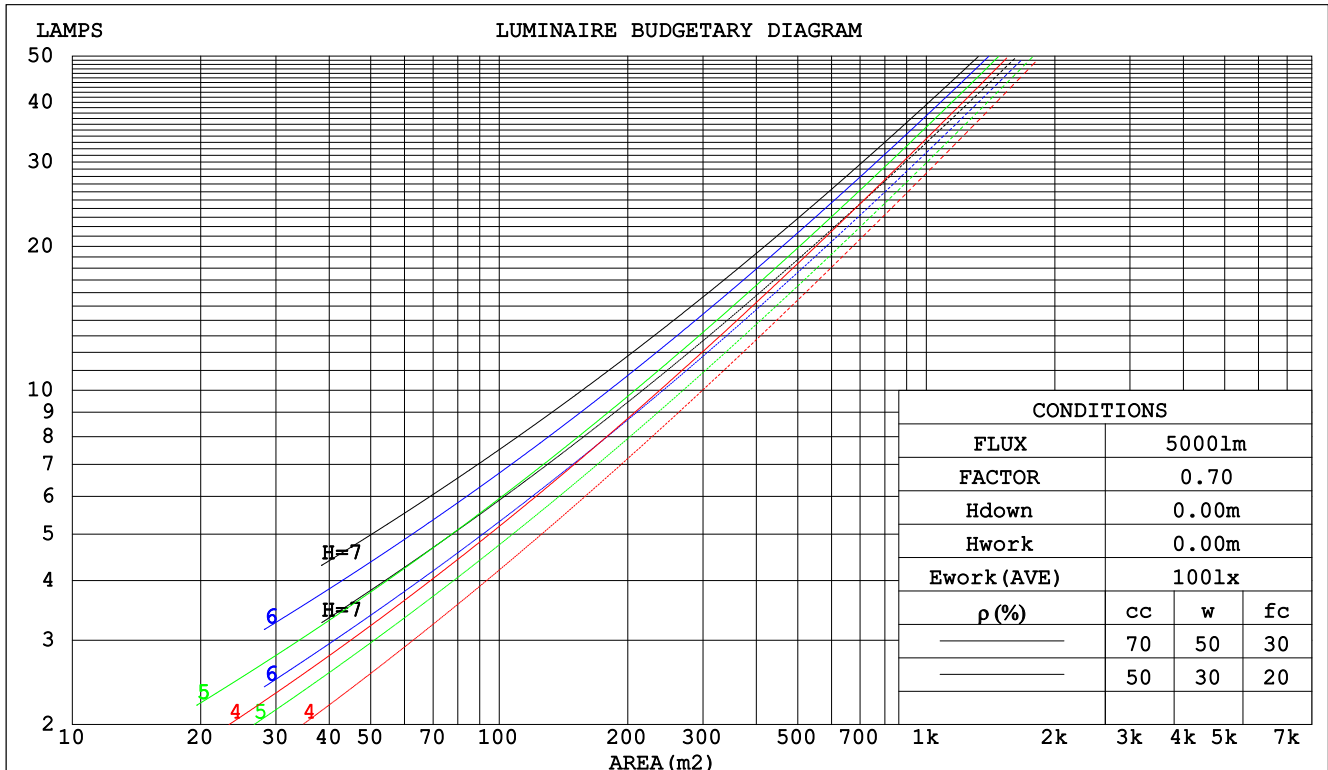
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

$\gamma$  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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	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:2023-08-09

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:0.6792A P:16.302W PF:1.0000 Freq:0Hz		
Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	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	.318	.181	.057	.308	.176	.056	.291	.167	.053	.276	.159	.051	.261	.152	.049		
2.0	.293	.161	.049	.285	.157	.048	.270	.150	.047	.256	.144	.045	.243	.138	.043		
3.0	.270	.143	.043	.262	.141	.042	.249	.135	.041	.236	.129	.040	.225	.124	.038		
4.0	.248	.129	.038	.241	.126	.037	.229	.122	.036	.218	.117	.035	.207	.113	.034		
5.0	.229	.116	.034	.223	.114	.033	.212	.110	.032	.202	.106	.032	.192	.103	.031		
6.0	.212	.106	.030	.206	.104	.030	.197	.101	.029	.187	.097	.029	.179	.094	.028		
7.0	.197	.097	.028	.192	.096	.027	.183	.093	.027	.175	.090	.026	.167	.087	.026		
8.0	.184	.090	.025	.179	.088	.025	.171	.086	.024	.164	.083	.024	.157	.080	.023		
9.0	.172	.083	.023	.168	.082	.023	.161	.080	.023	.154	.077	.022	.147	.075	.022		
10.0	.162	.078	.022	.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	.240	.240	.240	.205	.205	.205	.140	.140	.140	.081	.081	.081	.026	.026	.026	
1.0	.231	.206	.184	.198	.177	.158	.135	.122	.110	.078	.070	.064	.025	.023	.021	
2.0	.223	.183	.148	.191	.157	.128	.131	.109	.089	.075	.063	.052	.024	.020	.017	
3.0	.215	.165	.125	.185	.142	.109	.127	.099	.076	.073	.058	.045	.024	.019	.015	
4.0	.208	.152	.110	.178	.131	.095	.123	.092	.067	.071	.054	.040	.023	.017	.013	
5.0	.200	.142	.099	.172	.123	.086	.118	.086	.061	.069	.050	.036	.022	.016	.012	
6.0	.193	.134	.091	.166	.116	.079	.114	.081	.056	.066	.048	.033	.021	.016	.011	
7.0	.186	.127	.085	.160	.110	.074	.111	.077	.053	.064	.045	.031	.021	.015	.010	
8.0	.180	.121	.081	.155	.105	.070	.107	.074	.050	.062	.043	.030	.020	.014	.010	
9.0	.174	.116	.077	.150	.101	.067	.104	.071	.048	.060	.042	.029	.020	.014	.009	
10.0	.168	.112	.074	.145	.097	.065	.101	.068	.046	.059	.040	.028	.019	.013	.009	

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

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:0.6792A P:16.302W PF:1.0000 Freq:0Hz										
Lamp Flux:1387.47x1 lm										
NAME: RIBDC-47-30K-AM					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: RAYHIL					SUR.: 0.01*1.2			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	23.4	24.8	23.7	25.1	25.4	23.4	24.9	23.8	25.2	25.5
3H	24.9	26.2	25.3	26.5	26.9	25.1	26.5	25.5	26.8	27.2
4H	25.5	26.7	25.9	27.1	27.5	25.9	27.2	26.3	27.6	27.9
6H	25.9	27.0	26.3	27.4	27.8	26.7	27.8	27.1	28.2	28.6
8H	26.0	27.1	26.4	27.5	27.9	27.0	28.1	27.4	28.5	29.0
12H	26.0	27.1	26.5	27.5	28.0	27.4	28.5	27.8	28.9	29.3
4H 2H	24.0	25.2	24.4	25.6	26.0	24.0	25.3	24.4	25.6	26.0
3H	25.7	26.8	26.1	27.2	27.6	25.9	27.0	26.4	27.4	27.9
4H	26.4	27.4	26.9	27.8	28.3	26.9	27.9	27.3	28.3	28.8
6H	26.9	27.8	27.4	28.3	28.8	27.7	28.6	28.2	29.1	29.6
8H	27.1	27.9	27.6	28.4	29.0	28.2	29.0	28.7	29.5	30.0
12H	27.2	28.0	27.7	28.5	29.0	28.6	29.4	29.1	29.9	30.4
8H 4H	26.7	27.6	27.2	28.0	28.6	27.1	28.0	27.6	28.4	29.0
6H	27.5	28.1	28.0	28.7	29.2	28.2	28.9	28.7	29.4	30.0
8H	27.7	28.3	28.3	28.9	29.5	28.7	29.4	29.3	29.9	30.5
12H	27.9	28.4	28.5	29.0	29.6	29.3	29.9	29.9	30.4	31.0
12H 4H	26.8	27.5	27.3	28.0	28.6	27.1	27.9	27.7	28.4	28.9
6H	27.6	28.2	28.1	28.7	29.3	28.3	28.9	28.8	29.4	30.0
8H	27.9	28.4	28.5	29.0	29.6	28.9	29.4	29.4	30.0	30.6
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, 1387 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.1)  
Area: 0.012 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

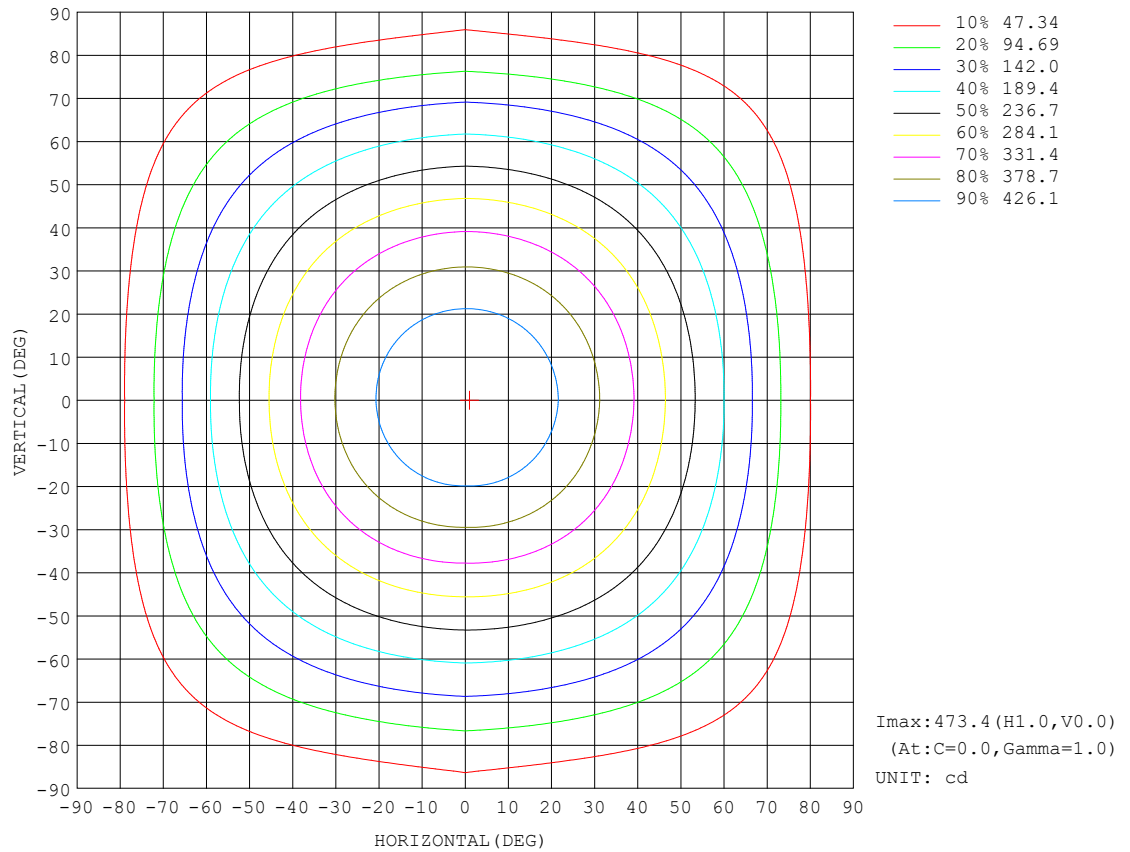
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT)    k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	53	43	37	30
0.80	65	54	46	64	53	46	62	52	45	38
1.00	74	62	55	72	61	54	69	62	54	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	83	74	67	80	72	66	57
2.00	92	83	77	90	82	76	86	79	74	64
2.50	96	88	82	94	86	81	89	83	78	68
3.00	100	92	87	97	90	85	92	87	82	72
4.00	104	98	93	101	95	91	96	91	87	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:2023-08-09

$\gamma$  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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:



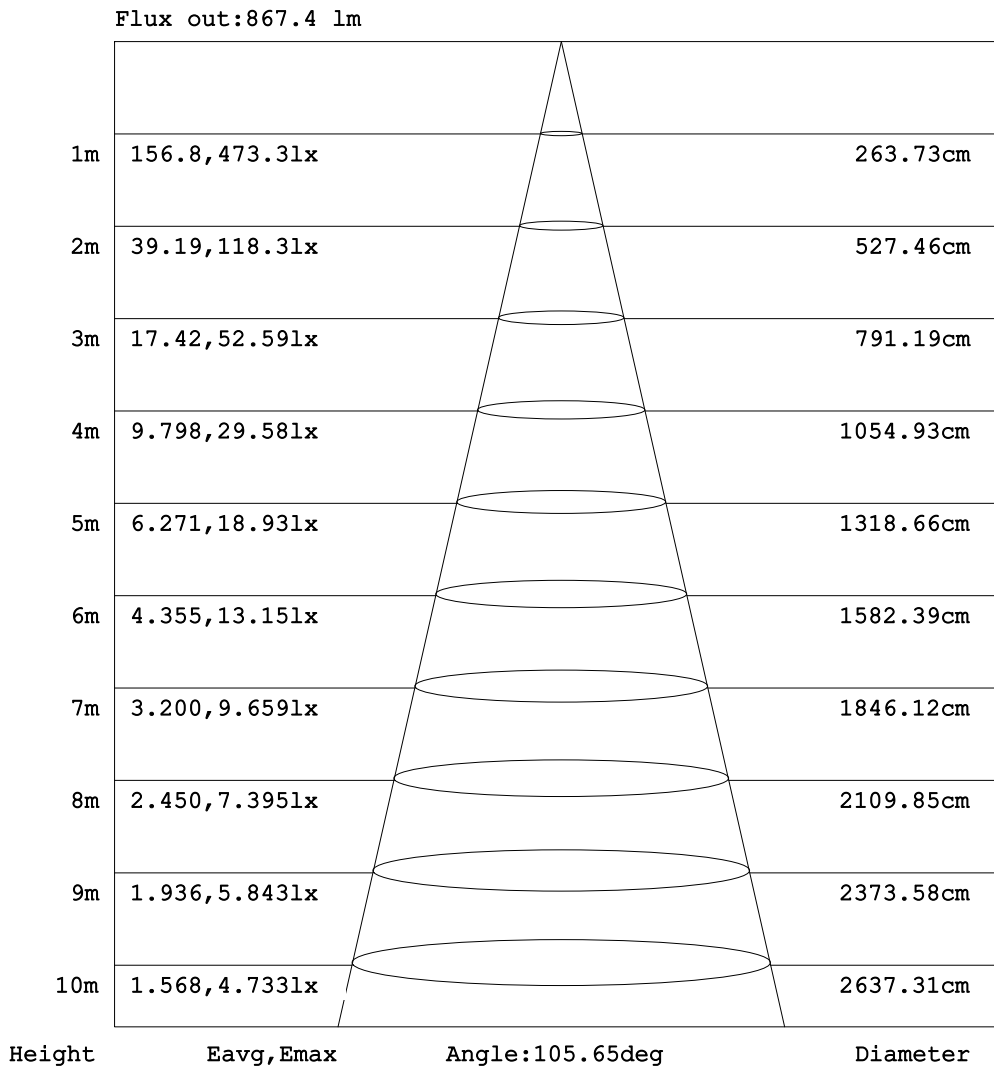
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JZ  
Test Date: 2023-08-09

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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:



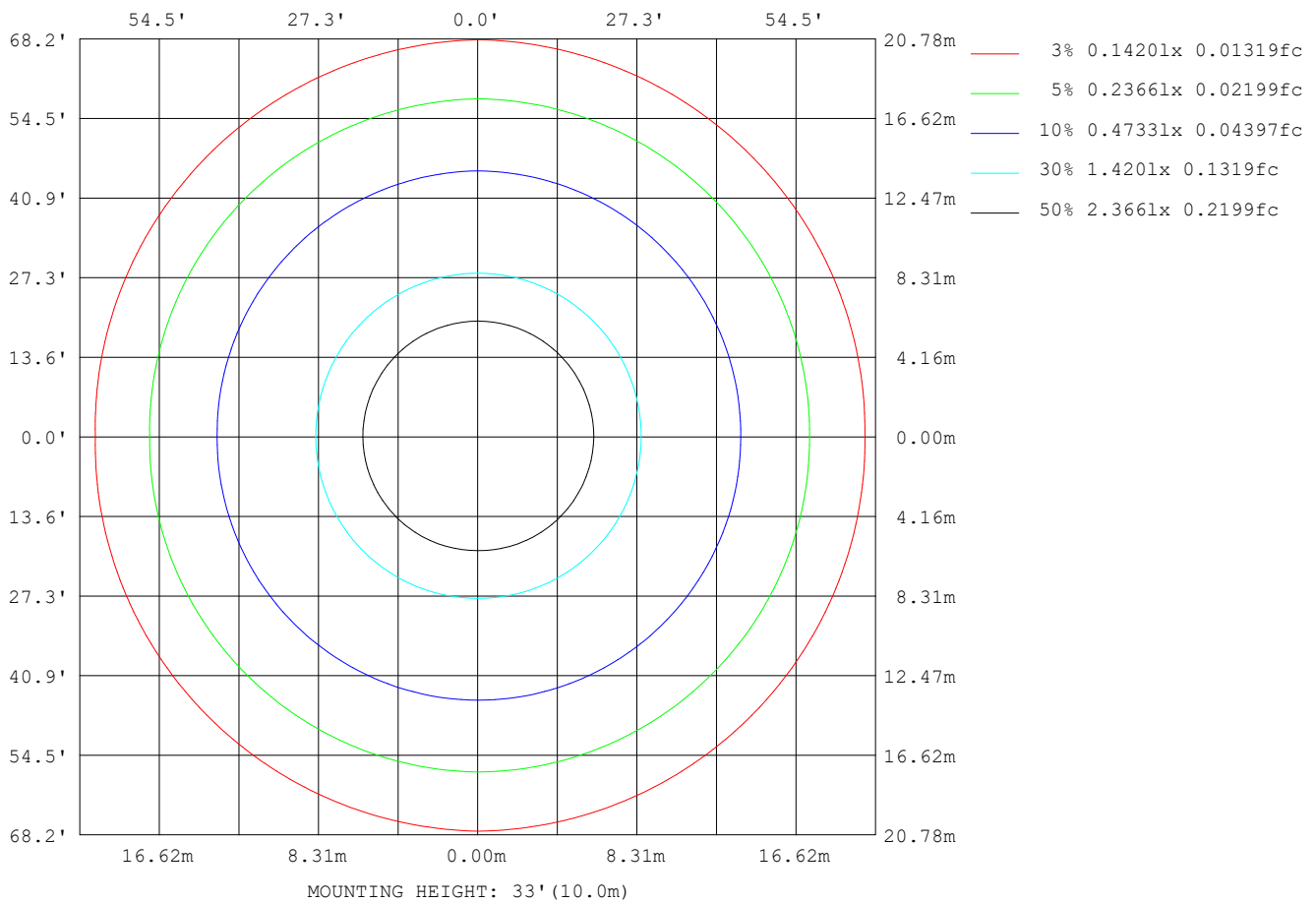
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

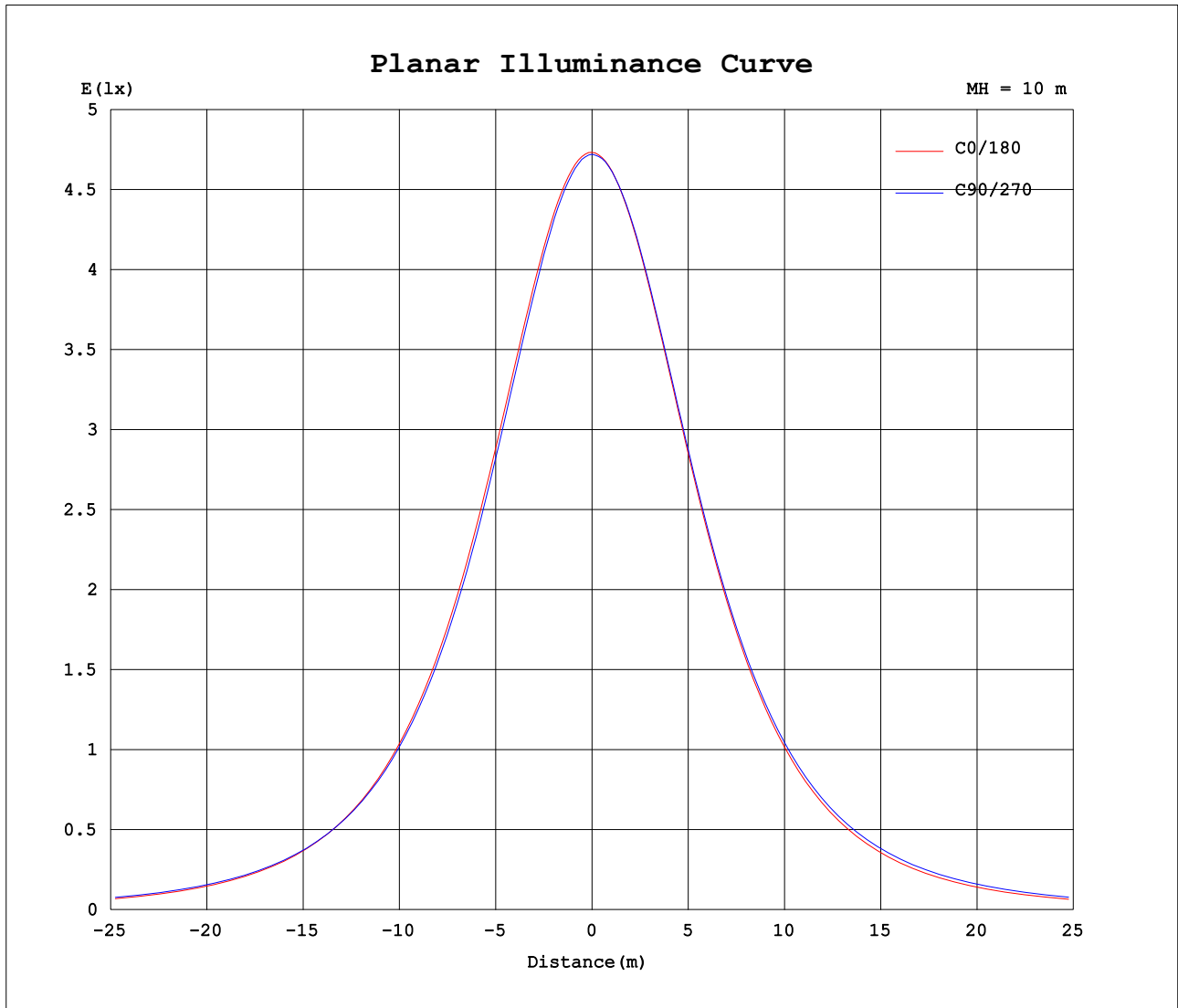
AvgL	cd/m2
L_0~180 (65) av	29560
L_0~180 (75) av	25088
L_0~180 (85) av	15314
L_90~270 (65) av	32831
L_90~270 (75) av	33224
L_90~270 (85) av	49390
L_45 (65) av	31560
L_45 (75) av	30101
L_45 (85) av	36454

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

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: 2023-08-09

$\gamma$  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:0.6792A P:16.302W PF:1.0000 Freq:0Hz Lamp Flux:1387.47x1 lm		
NAME: RIBDC-47-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	473	472	473	472															
5	471	469	470	470															
10	463	459	461	462															
15	450	445	448	449															
20	433	426	429	431															
25	411	402	406	409															
30	385	376	380	384															
35	357	348	351	356															
40	326	318	320	326															
45	293	288	287	295															
50	260	257	253	264															
55	225	226	218	232															
60	189	195	182	200															
65	154	165	146	168															
70	117	134	110	137															
75	81.5	104	74.4	102															
80	47.6	76.1	40.8	74.9															
85	18.6	52.5	13.4	50.8															
90	1.81	39.2	0.81	37.9															
95	0.65	38.0	0.66	36.2															
100	0.68	37.3	0.68	36.3															
105	0.71	36.8	0.78	36.2															
110	0.81	36.2	0.87	35.6															
115	0.94	35.1	1.02	34.8															
120	1.05	33.7	1.17	33.6															
125	1.16	32.0	1.29	32.2															
130	1.34	29.9	1.42	30.5															
135	1.50	27.4	1.55	27.0															
140	1.57	22.4	1.66	20.7															
145	1.70	12.8	1.77	12.3															
150	1.79	2.80	1.86	4.46															
155	1.91	2.66	1.98	2.96															
160	1.98	2.50	2.08	2.85															
165	2.08	2.38	2.14	2.53															
170	2.12	2.25	2.21	2.44															
175	2.14	2.20	2.21	2.34															
180	2.20	2.19	2.22	2.27															

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JZ  
Test Date:2023-08-09

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: