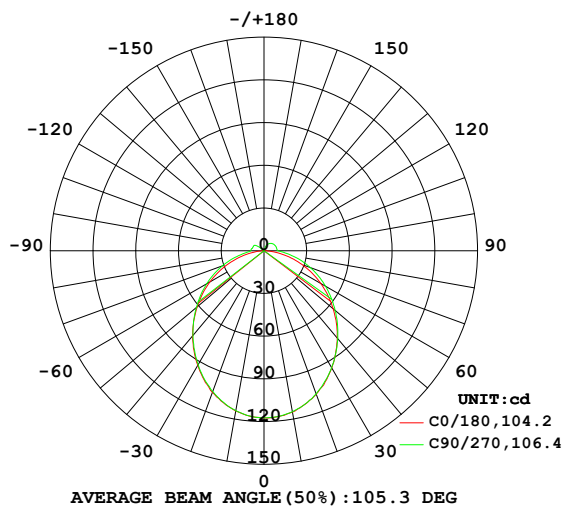


LUMINAIRE PHOTOMETRIC TEST REPORT

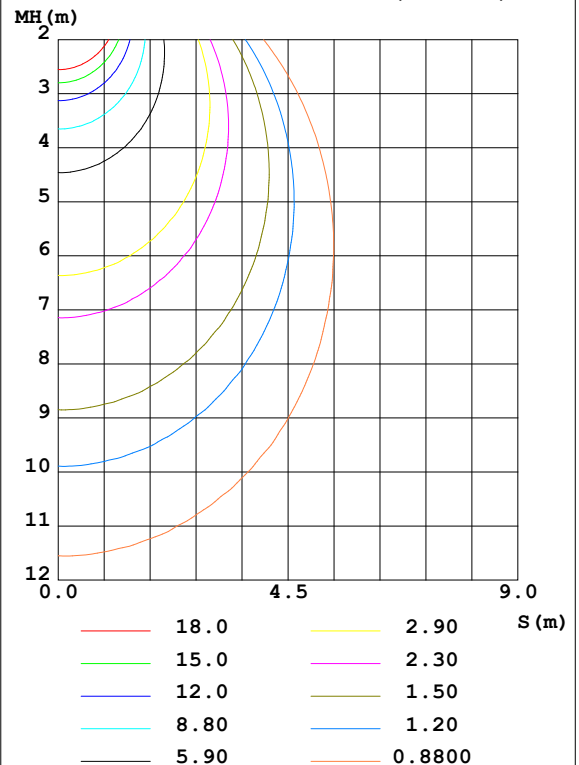
Test:U:24.001V I:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 82.26 lm/W			
MODEL		I _{max} (cd)	117.5	S/MH (C0/180)	1.19
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE (V)		TOTAL FLUX (lm)	338.79	η UP, DN (C0-180)	3.6, 48.0
NOMINAL FLUX (lm)	338.68	CIE CLASS	DIRECT	η UP, DN (C180-360)	2.6, 45.8
LAMPS INSIDE	1	η up (%)	6.2	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	93.8	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:

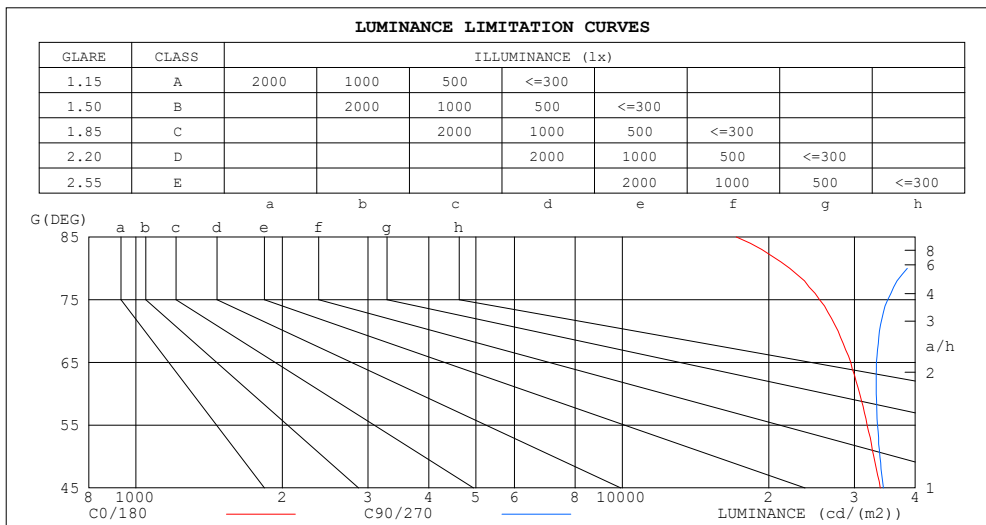
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	115.1	114.8	114.2	114.1					0- 10	11.07	11.07	3.27,3.27
20	107.2	107.1	105.9	105.2					10- 20	31.28	42.35	12.5,12.5
30	95.11	95.01	92.89	92.46					20- 30	46.29	88.63	26.2,26.2
40	80.16	80.63	77.99	77.63					30- 40	54.22	142.9	42.2,42.2
50	63.41	65.26	61.28	62.02					40- 50	54.88	197.7	58.4,58.4
60	46.13	49.88	43.96	46.49					50- 60	49.04	246.8	72.8,72.9
70	28.49	34.66	26.31	31.17					60- 70	37.98	284.8	84.1,84.1
80	11.51	20.08	9.627	16.83					70- 80	23.42	308.2	91,91
90	0.5468	9.801	0.4053	9.496					80- 90	9.562	317.7	93.8,93.8
100	0.0985	9.094	0.2965	8.918					90-100	5.169	322.9	95.3,95.3
110	0.1403	8.941	0.2334	8.191					100-110	4.709	327.6	96.7,96.7
120	0.1923	8.510	0.2784	7.687					110-120	4.277	331.9	98,98
130	0.2460	7.820	0.3612	0.9562					120-130	3.172	335.1	98.9,98.9
140	0.3264	6.810	0.4189	0.3828					130-140	1.637	336.7	99.4,99.4
150	0.3940	5.455	0.4819	0.3820					140-150	1.159	337.9	99.7,99.8
160	0.4370	2.878	0.5357	0.4432					150-160	0.6670	338.5	99.9,100
170	0.4961	0.7267	0.5650	0.5540					160-170	0.2109	338.7	100,100
180	0.5542	0.5665	0.5665	0.5665					170-180	0.0544	338.8	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

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:

LUMINANCE LIMITATION CURVES

Test:U:24.001V I:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17158	53234
80	22091	38539
75	25438	35121
70	27769	33777
65	29479	33292
60	30753	33253
55	31855	33461
50	32884	33843
45	33910	34417

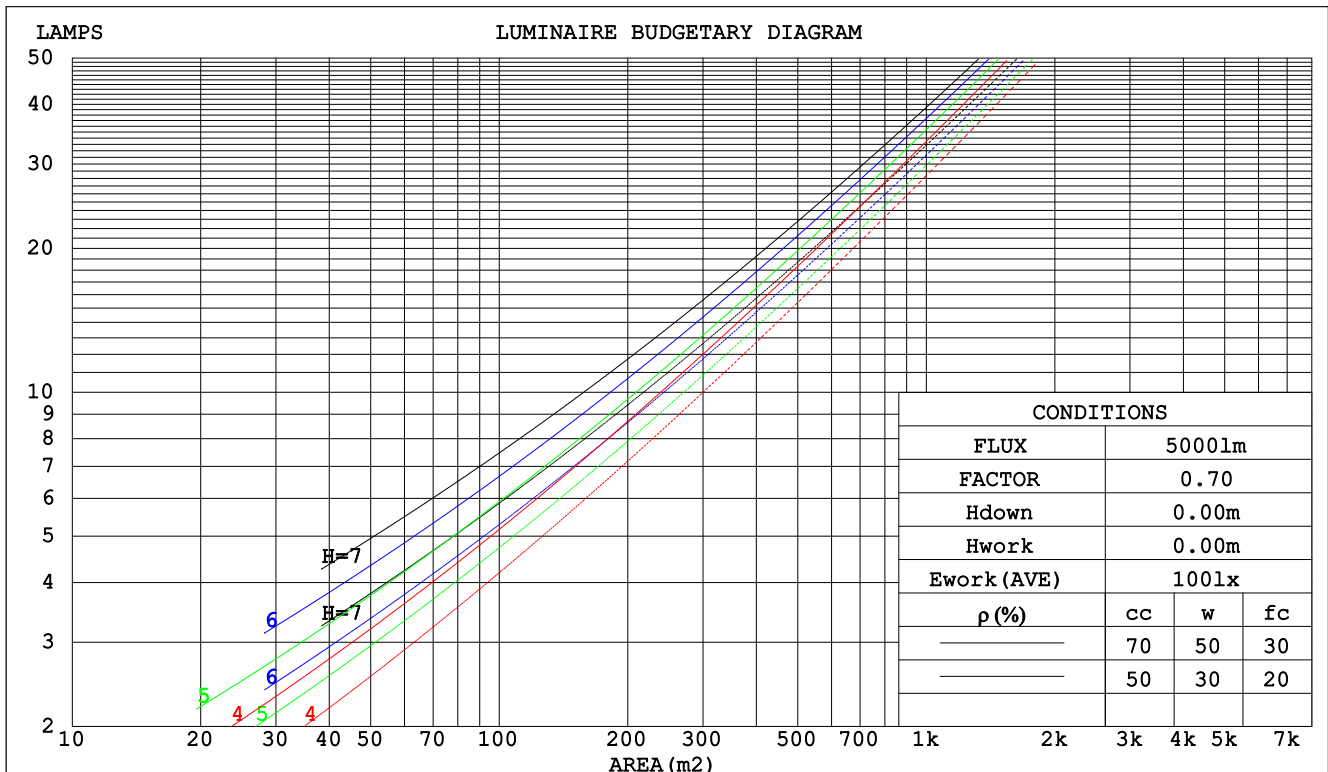
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.001V I:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	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:0.1716A P:4.1186W PF:1.0000 Freq:0Hz		
Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	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	.317	.180	.057	.308	.176	.056	.291	.167	.053	.276	.159	.051	.262	.152	.049		
2.0	.293	.161	.049	.285	.157	.048	.270	.150	.047	.256	.144	.045	.243	.138	.043		
3.0	.269	.143	.043	.262	.140	.042	.249	.135	.041	.236	.129	.040	.225	.124	.039		
4.0	.247	.129	.038	.241	.126	.037	.229	.121	.036	.218	.117	.035	.208	.113	.034		
5.0	.228	.116	.034	.223	.114	.033	.212	.110	.032	.202	.106	.032	.192	.103	.031		
6.0	.211	.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	.183	.090	.025	.179	.088	.025	.171	.086	.024	.164	.083	.024	.157	.081	.023		
9.0	.172	.083	.023	.168	.082	.023	.161	.080	.023	.154	.077	.022	.148	.075	.022		
10.0	.162	.077	.022	.158	.076	.021	.152	.074	.021	.145	.072	.021	.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	.238	.238	.238	.203	.203	.203	.139	.139	.139	.080	.080	.080	.025	.025	.025	
1.0	.229	.204	.182	.196	.175	.156	.134	.120	.108	.077	.070	.063	.025	.022	.020	
2.0	.221	.180	.146	.189	.155	.126	.129	.107	.088	.075	.062	.052	.024	.020	.017	
3.0	.213	.163	.123	.182	.140	.106	.125	.097	.075	.072	.057	.044	.023	.018	.014	
4.0	.205	.150	.107	.176	.129	.093	.121	.090	.066	.070	.053	.039	.023	.017	.013	
5.0	.198	.139	.096	.170	.120	.084	.117	.084	.059	.068	.049	.035	.022	.016	.012	
6.0	.190	.131	.088	.164	.113	.077	.113	.079	.054	.065	.047	.032	.021	.015	.011	
7.0	.184	.124	.083	.158	.108	.072	.109	.075	.051	.063	.044	.030	.020	.015	.010	
8.0	.177	.118	.078	.153	.103	.068	.106	.072	.048	.061	.043	.029	.020	.014	.010	
9.0	.171	.114	.075	.147	.099	.065	.102	.069	.046	.059	.041	.028	.019	.013	.009	
10.0	.165	.109	.072	.143	.095	.063	.099	.067	.045	.058	.039	.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:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm										
NAME: RIBDC-12-30K-AM					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: RAYHIL					SUR.: 0.01*0.3			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	28.3	29.7	28.6	30.0	30.3	28.5	29.9	28.8	30.2	30.6
3H	29.7	31.1	30.1	31.4	31.8	30.3	31.6	30.6	31.9	32.3
4H	30.3	31.6	30.7	31.9	32.3	31.1	32.3	31.5	32.7	33.1
6H	30.7	31.9	31.1	32.3	32.7	31.8	33.0	32.3	33.4	33.8
8H	30.8	32.0	31.3	32.4	32.8	32.2	33.3	32.6	33.7	34.2
12H	30.9	32.0	31.3	32.4	32.8	32.6	33.7	33.0	34.1	34.5
4H 2H	28.9	30.1	29.3	30.5	30.9	29.1	30.3	29.5	30.7	31.1
3H	30.6	31.7	31.0	32.1	32.5	31.0	32.1	31.5	32.5	33.0
4H	31.3	32.3	31.8	32.7	33.2	32.0	33.0	32.5	33.4	33.9
6H	31.8	32.7	32.3	33.2	33.7	32.9	33.8	33.4	34.3	34.8
8H	32.0	32.8	32.5	33.3	33.8	33.4	34.2	33.9	34.7	35.2
12H	32.1	32.9	32.6	33.4	33.9	33.8	34.6	34.4	35.1	35.6
8H 4H	31.7	32.5	32.2	33.0	33.5	32.3	33.1	32.8	33.6	34.1
6H	32.4	33.1	32.9	33.6	34.1	33.4	34.1	33.9	34.6	35.1
8H	32.7	33.3	33.2	33.8	34.4	33.9	34.6	34.5	35.1	35.7
12H	32.8	33.4	33.4	33.9	34.5	34.6	35.1	35.2	35.7	36.3
12H 4H	31.7	32.5	32.2	33.0	33.5	32.3	33.0	32.8	33.5	34.1
6H	32.5	33.1	33.1	33.6	34.2	33.4	34.0	34.0	34.6	35.2
8H	32.8	33.4	33.4	33.9	34.5	34.1	34.6	34.6	35.2	35.8
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, 338.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.8)
Area: 0.003 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:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:

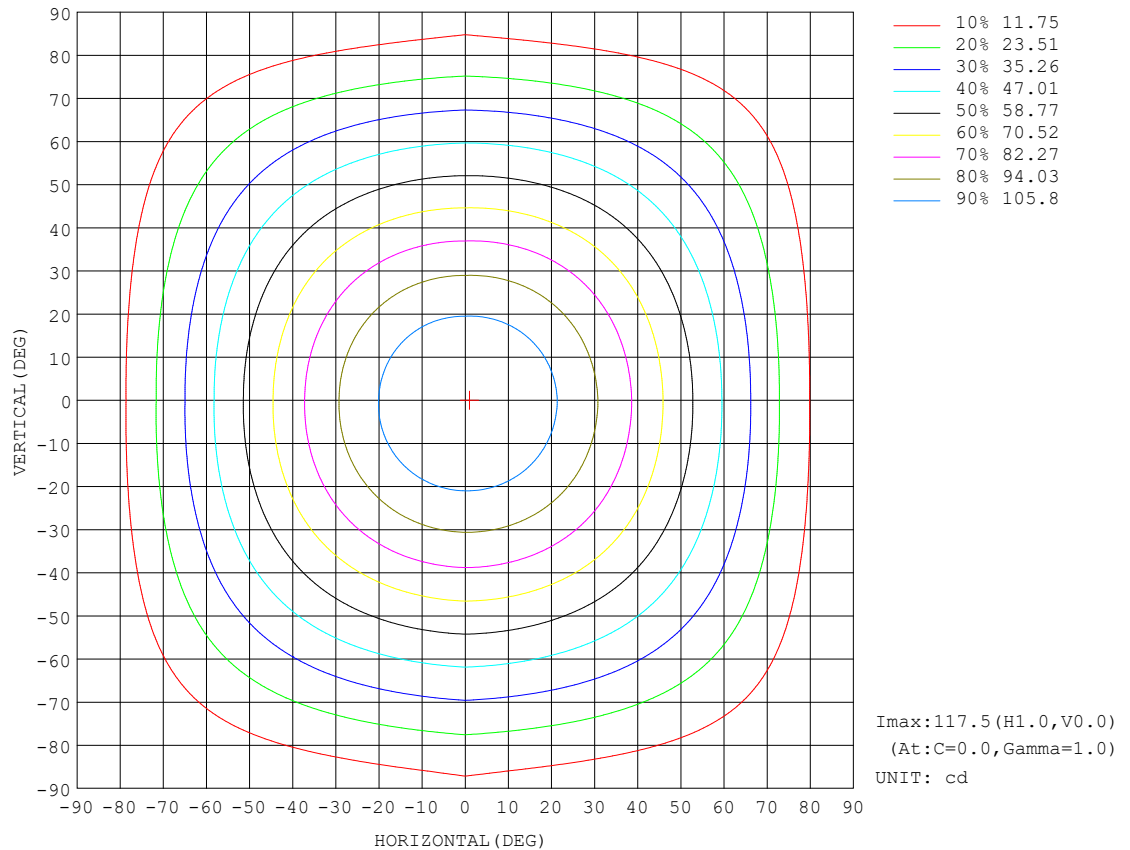
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	31
0.80	66	54	47	64	53	46	62	52	46	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	73
4.00	104	98	93	101	96	91	96	91	88	77
5.00	106	101	97	104	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

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:

ISOCANDELA DIAGRAM

Test:U:24.001V I:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:

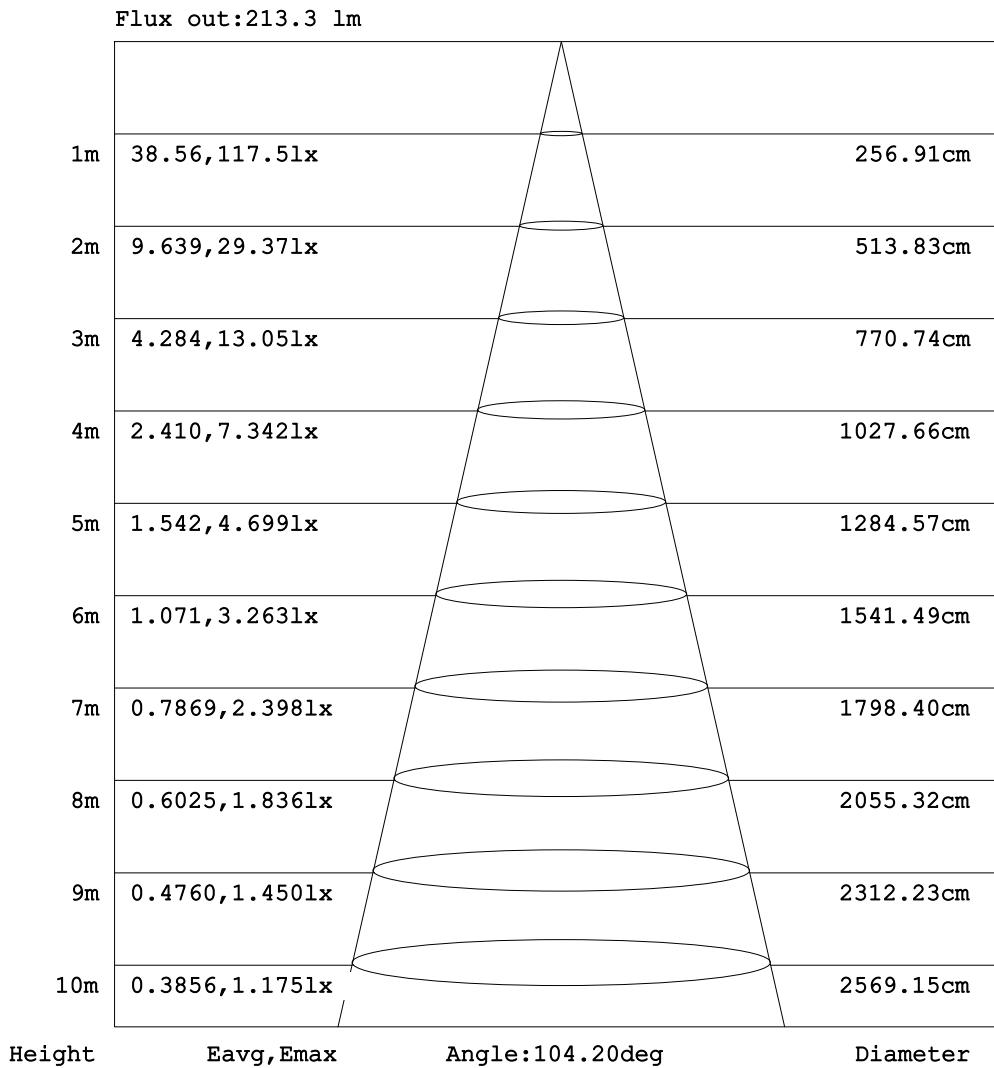


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:



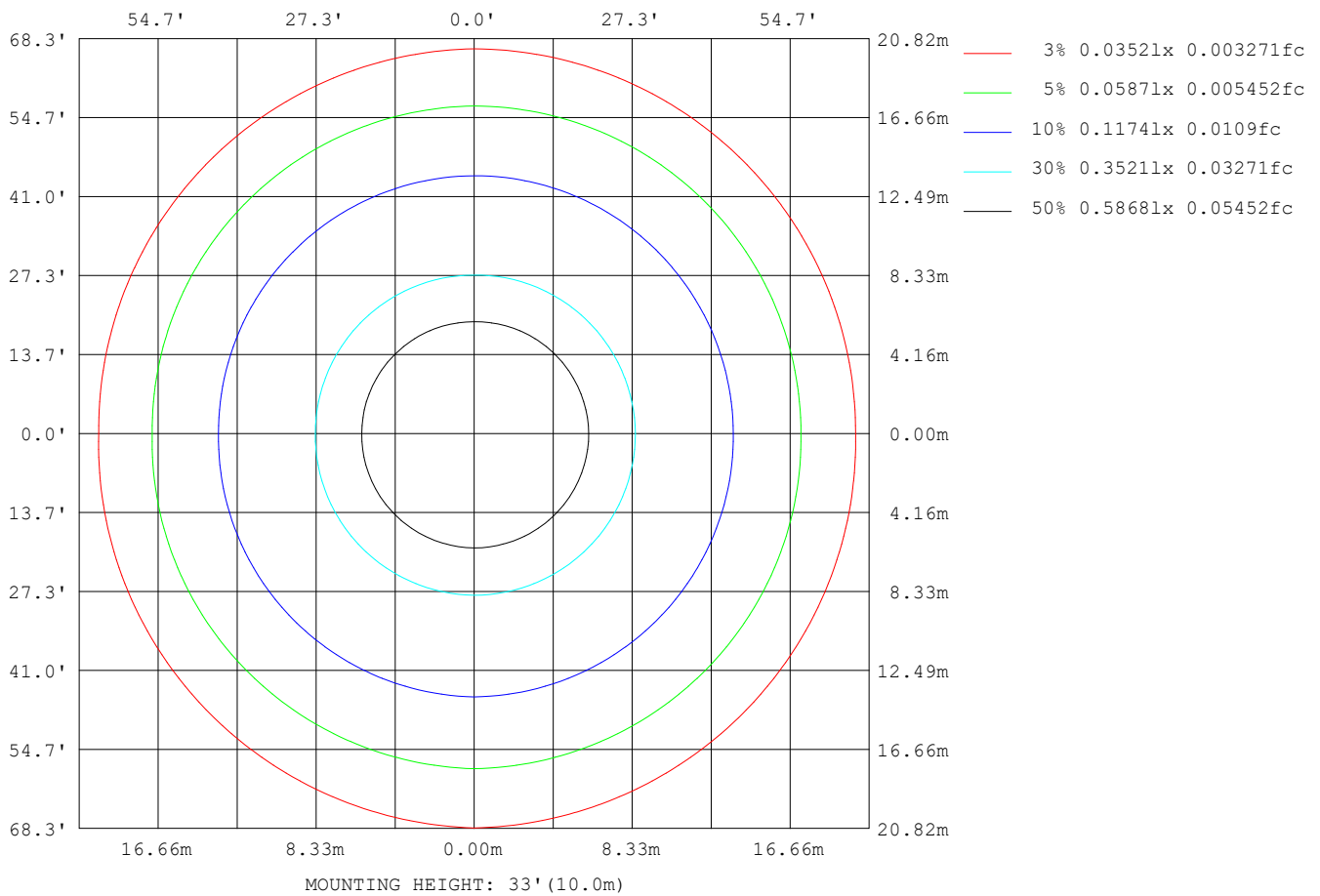
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	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:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:

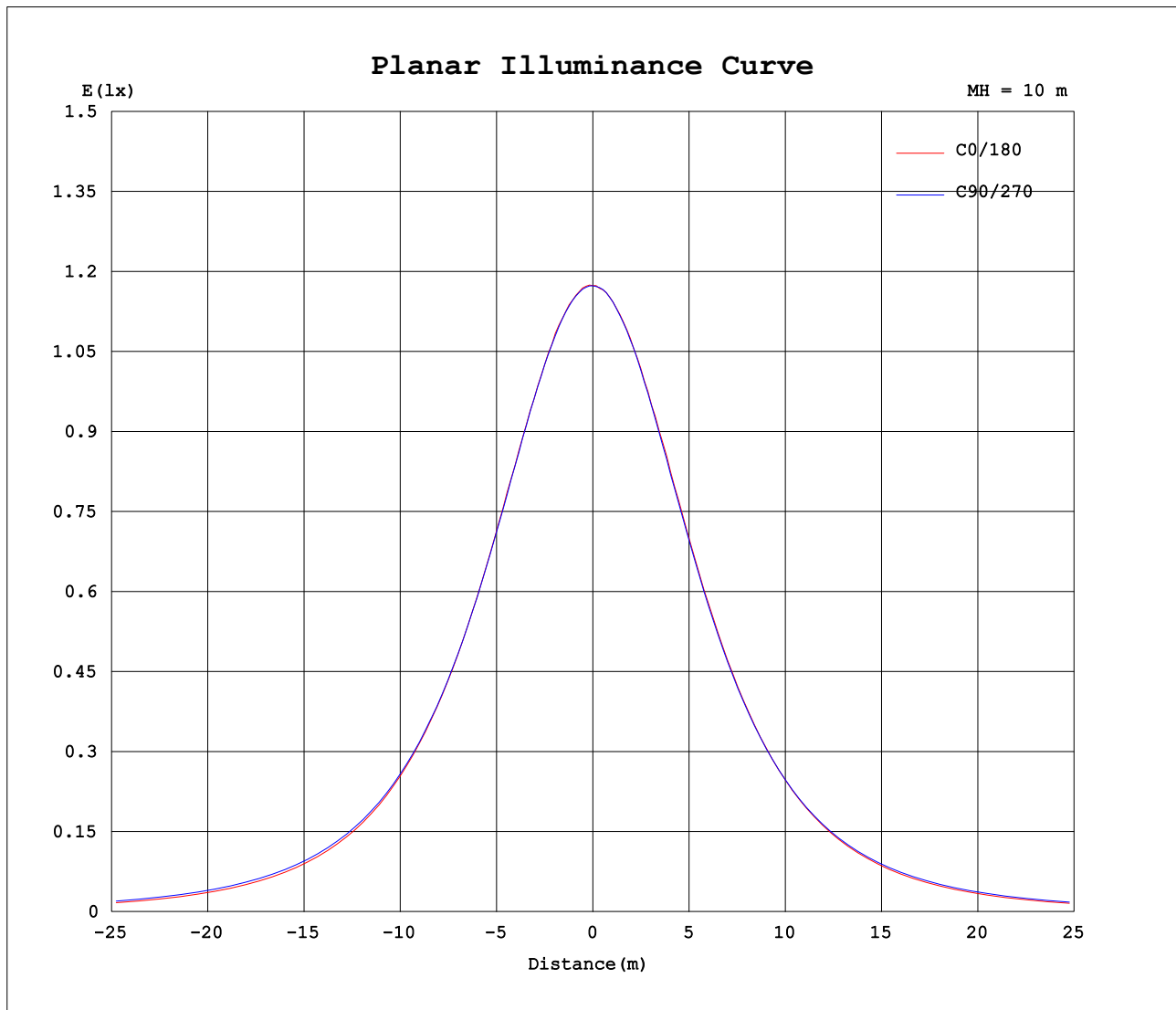
AvgL	cd/m2
L_0~180 (65) av	28623
L_0~180 (75) av	24137
L_0~180 (85) av	14562
L_90~270 (65) av	31927
L_90~270 (75) av	32852
L_90~270 (85) av	48655
L_45 (65) av	30635
L_45 (75) av	29502
L_45 (85) av	35708

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

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.001V I:0.1716A P:4.1186W PF:1.0000 Freq:0Hz Lamp Flux:338.68x1 lm		
NAME: RIBDC-12-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.3	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	117	117	117	117															
5	117	117	117	117															
10	115	115	114	114															
15	112	111	110	110															
20	107	107	106	105															
25	102	101	99.9	99.3															
30	95.1	95.0	92.9	92.5															
35	87.8	87.9	85.7	85.2															
40	80.2	80.6	78.0	77.6															
45	71.9	73.0	69.8	69.9															
50	63.4	65.3	61.3	62.0															
55	54.8	57.6	52.7	54.3															
60	46.1	49.9	44.0	46.5															
65	37.4	42.2	35.2	38.7															
70	28.5	34.7	26.3	31.2															
75	19.8	27.3	17.7	23.7															
80	11.5	20.1	9.63	16.8															
85	4.49	13.9	3.13	11.5															
90	0.55	9.80	0.41	9.50															
95	0.10	9.25	0.35	9.18															
100	0.10	9.09	0.30	8.92															
105	0.10	9.06	0.24	8.34															
110	0.14	8.94	0.23	8.19															
115	0.16	8.77	0.25	8.10															
120	0.19	8.51	0.28	7.69															
125	0.21	8.20	0.32	5.99															
130	0.25	7.82	0.36	0.96															
135	0.31	7.35	0.38	0.38															
140	0.33	6.81	0.42	0.38															
145	0.36	6.17	0.47	0.38															
150	0.39	5.45	0.48	0.38															
155	0.39	4.48	0.49	0.40															
160	0.44	2.88	0.54	0.44															
165	0.47	1.08	0.56	0.48															
170	0.50	0.73	0.56	0.55															
175	0.54	0.61	0.57	0.55															
180	0.55	0.57	0.57	0.57															

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: