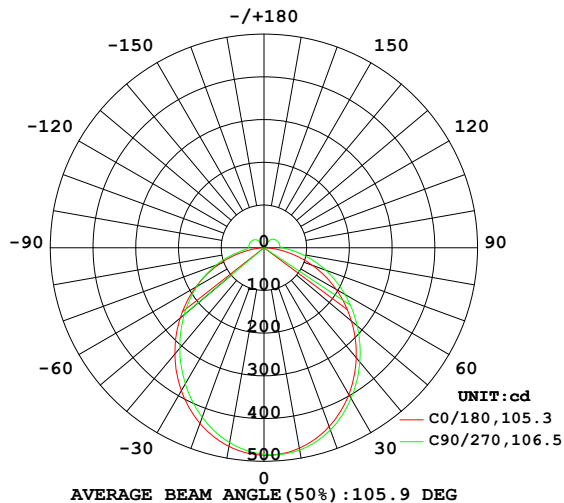


LUMINAIRE PHOTOMETRIC TEST REPORT

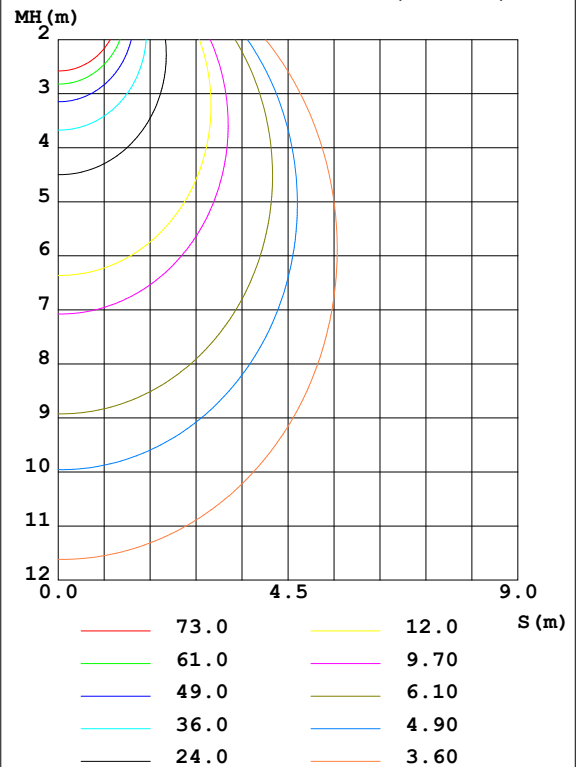
Test:U:24.001V I:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 86.00 lm/W			
MODEL		I _{max} (cd)	485.9	S/MH (C0/180)	1.19
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.15
RATED VOLTAGE (V)		TOTAL FLUX (lm)	1413.5	η UP,DN (C0-180)	3.3,49.1
NOMINAL FLUX (lm)	1413.49	CIE CLASS	DIRECT	η UP,DN (C180-360)	3.2,44.4
LAMPS INSIDE	1	η up (%)	6.4	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	93.6	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:

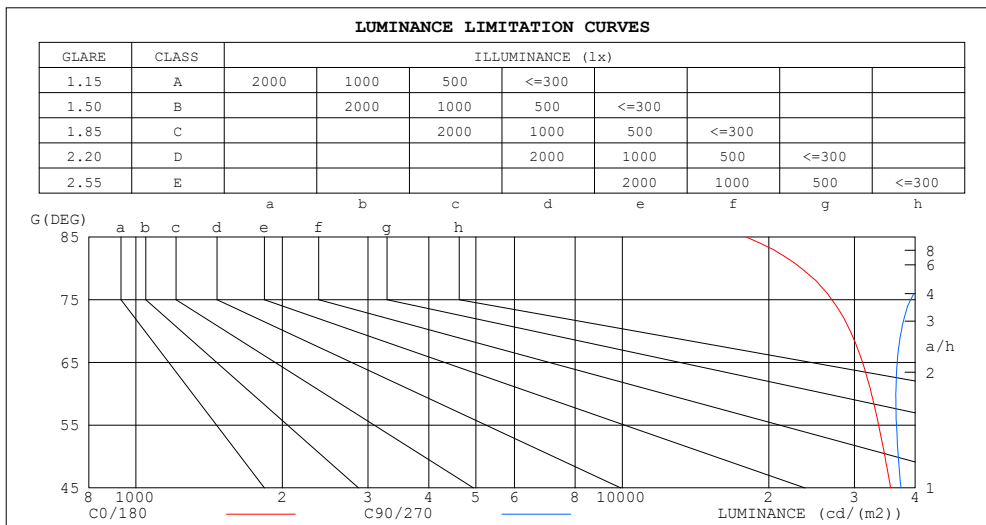
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	476.4	480.8	472.2	463.2					0- 10	45.71	45.71	3.23,3.23
20	445.6	453.8	437.8	422.6					10- 20	129.4	175.1	12.4,12.4
30	397.1	407.4	386.7	368.0					20- 30	191.9	367.0	26,26
40	335.8	348.9	324.4	306.8					30- 40	225.4	592.3	41.9,41.9
50	267.4	284.8	256.1	243.7					40- 50	228.7	821.0	58.1,58.1
60	195.1	219.0	184.3	181.3					50- 60	204.9	1026	72.6,72.6
70	120.7	153.7	111.2	119.6					60- 70	158.9	1185	83.8,83.8
80	48.66	90.50	41.08	61.16					70- 80	97.84	1283	90.7,90.7
90	1.793	42.82	0.8843	36.91					80- 90	39.77	1322	93.6,93.6
100	0.5759	37.08	0.6900	35.73					90-100	20.68	1343	95,95
110	0.7880	36.37	0.9364	34.97					100-110	19.52	1363	96.4,96.4
120	1.022	34.32	1.220	32.94					110-120	17.75	1380	97.7,97.7
130	1.305	30.85	1.515	29.64					120-130	14.97	1395	98.7,98.7
140	1.552	25.40	1.762	23.20					130-140	11.27	1407	99.5,99.5
150	1.773	2.845	1.983	3.067					140-150	4.889	1412	99.9,99.9
160	1.995	2.599	2.180	2.577					150-160	1.078	1413	99.9,99.9
170	2.131	2.303	2.303	2.311					160-170	0.6504	1413	100,100
180	2.328	2.279	2.315	2.192					170-180	0.2167	1414	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

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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-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	17973	60059
80	23351	43430
75	26966	39141
70	29412	37457
65	31178	36729
60	32509	36495
55	33652	36619
50	34666	36916
45	35602	37403

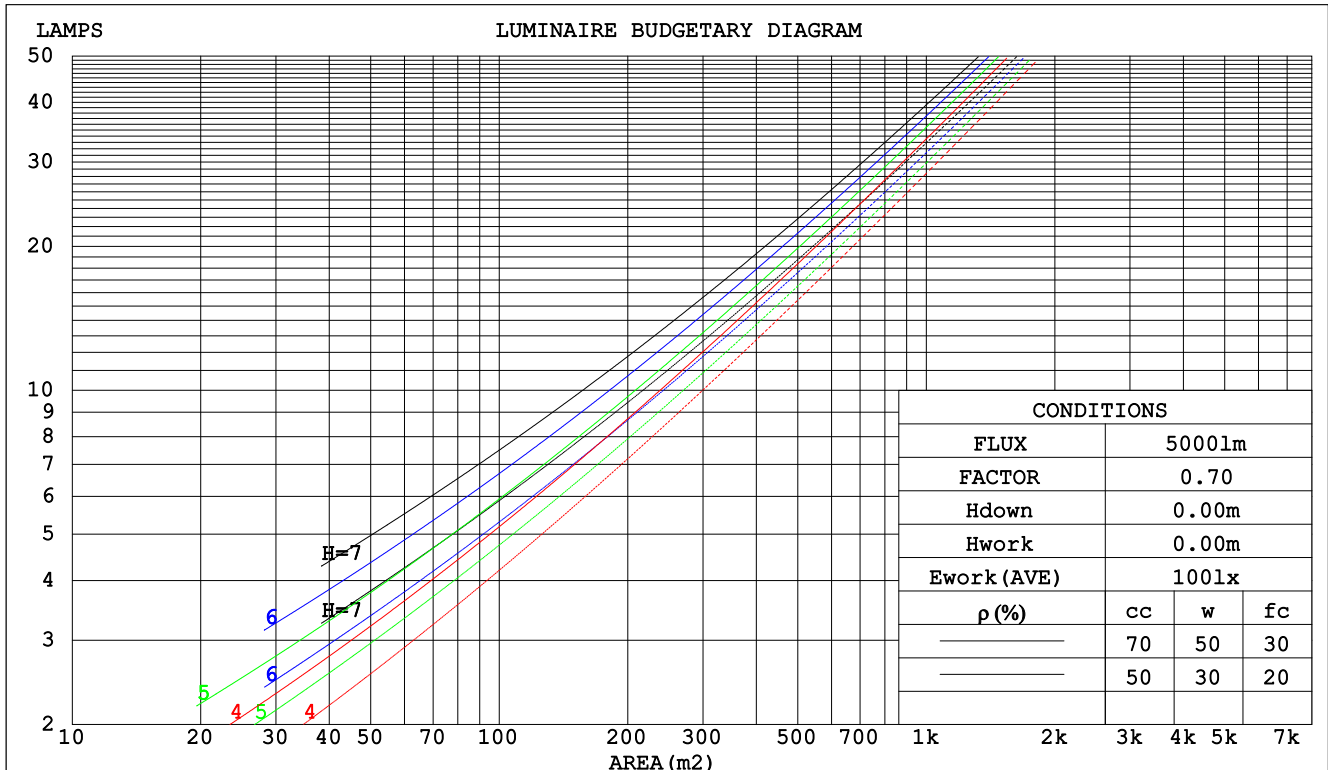
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-09

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.001V I:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-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						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.96	.96	.96	.94
1.0	1.02	.98	.94	.99	.95	.91	.94	.90	.87	.89	.86	.84	.84	.82	.80	.77
2.0	.89	.82	.76	.86	.80	.75	.82	.76	.72	.77	.73	.69	.74	.70	.67	.64
3.0	.78	.70	.63	.76	.68	.62	.72	.66	.60	.68	.63	.58	.65	.60	.57	.54
4.0	.69	.60	.54	.67	.59	.53	.64	.57	.51	.61	.55	.50	.58	.53	.49	.46
5.0	.62	.53	.46	.60	.52	.46	.57	.50	.44	.55	.48	.43	.52	.47	.42	.40
6.0	.56	.47	.40	.54	.46	.40	.52	.44	.39	.50	.43	.38	.47	.42	.37	.35
7.0	.50	.42	.36	.49	.41	.35	.47	.40	.35	.45	.39	.34	.43	.38	.33	.31
8.0	.46	.38	.32	.45	.37	.31	.43	.36	.31	.41	.35	.30	.40	.34	.30	.28
9.0	.42	.34	.29	.41	.34	.28	.40	.33	.28	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.35	.29	.25	.34	.29	.24	.23



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:0.6848A P:16.436W PF:1.0000 Freq:0Hz		
Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-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	.317	.180	.057	.308	.176	.056	.291	.167	.053	.276	.159	.051	.261	.151	.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	.038	
4.0	.248	.129	.038	.241	.126	.037	.229	.121	.036	.218	.117	.035	.207	.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	.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	.080	.080	.080	.026	.026	.026	
1.0	.230	.206	.183	.197	.176	.158	.135	.121	.109	.078	.070	.063	.025	.023	.021	
2.0	.222	.182	.148	.190	.156	.128	.130	.108	.089	.075	.063	.052	.024	.020	.017	
3.0	.214	.164	.124	.184	.142	.108	.126	.099	.076	.073	.058	.045	.023	.019	.015	
4.0	.207	.151	.109	.177	.131	.095	.122	.091	.067	.071	.053	.039	.023	.017	.013	
5.0	.199	.141	.098	.171	.122	.085	.118	.085	.060	.068	.050	.036	.022	.016	.012	
6.0	.192	.133	.090	.165	.115	.078	.114	.080	.055	.066	.047	.033	.021	.015	.011	
7.0	.185	.126	.084	.159	.109	.073	.110	.077	.052	.064	.045	.031	.021	.015	.010	
8.0	.179	.120	.080	.154	.104	.070	.107	.073	.049	.062	.043	.029	.020	.014	.010	
9.0	.173	.115	.076	.149	.100	.067	.103	.070	.047	.060	.042	.028	.019	.014	.009	
10.0	.167	.111	.074	.144	.096	.064	.100	.068	.046	.058	.040	.027	.019	.013	.009	

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

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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm										
NAME: RIBDC-47-40K-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	23.6	25.0	23.9	25.3	25.6	24.0	25.4	24.3	25.7	26.0
3H	25.1	26.4	25.4	26.7	27.1	25.8	27.1	26.1	27.4	27.8
4H	25.6	26.9	26.0	27.3	27.6	26.6	27.9	27.0	28.2	28.6
6H	26.0	27.2	26.5	27.6	28.0	27.4	28.6	27.8	29.0	29.4
8H	26.2	27.3	26.6	27.7	28.1	27.8	28.9	28.2	29.3	29.7
12H	26.2	27.3	26.7	27.7	28.1	28.2	29.3	28.6	29.7	30.1
4H 2H	24.2	25.5	24.6	25.8	26.2	24.5	25.8	24.9	26.1	26.5
3H	25.9	27.0	26.4	27.4	27.9	26.5	27.6	27.0	28.0	28.5
4H	26.7	27.6	27.1	28.1	28.5	27.5	28.5	28.0	28.9	29.4
6H	27.2	28.1	27.7	28.5	29.0	28.5	29.4	29.0	29.8	30.3
8H	27.4	28.2	27.9	28.7	29.2	28.9	29.8	29.4	30.2	30.8
12H	27.5	28.2	28.0	28.7	29.3	29.4	30.2	30.0	30.7	31.2
8H 4H	27.0	27.8	27.5	28.3	28.8	27.8	28.6	28.3	29.1	29.6
6H	27.8	28.4	28.3	29.0	29.5	28.9	29.6	29.5	30.1	30.7
8H	28.0	28.6	28.6	29.2	29.8	29.5	30.1	30.1	30.7	31.3
12H	28.2	28.7	28.8	29.3	29.9	30.2	30.7	30.8	31.3	31.9
12H 4H	27.1	27.8	27.6	28.3	28.9	27.8	28.5	28.3	29.0	29.6
6H	27.9	28.5	28.4	29.0	29.6	29.0	29.6	29.5	30.1	30.7
8H	28.2	28.7	28.8	29.3	29.9	29.6	30.2	30.2	30.7	31.3
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, 1413 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.2)
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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

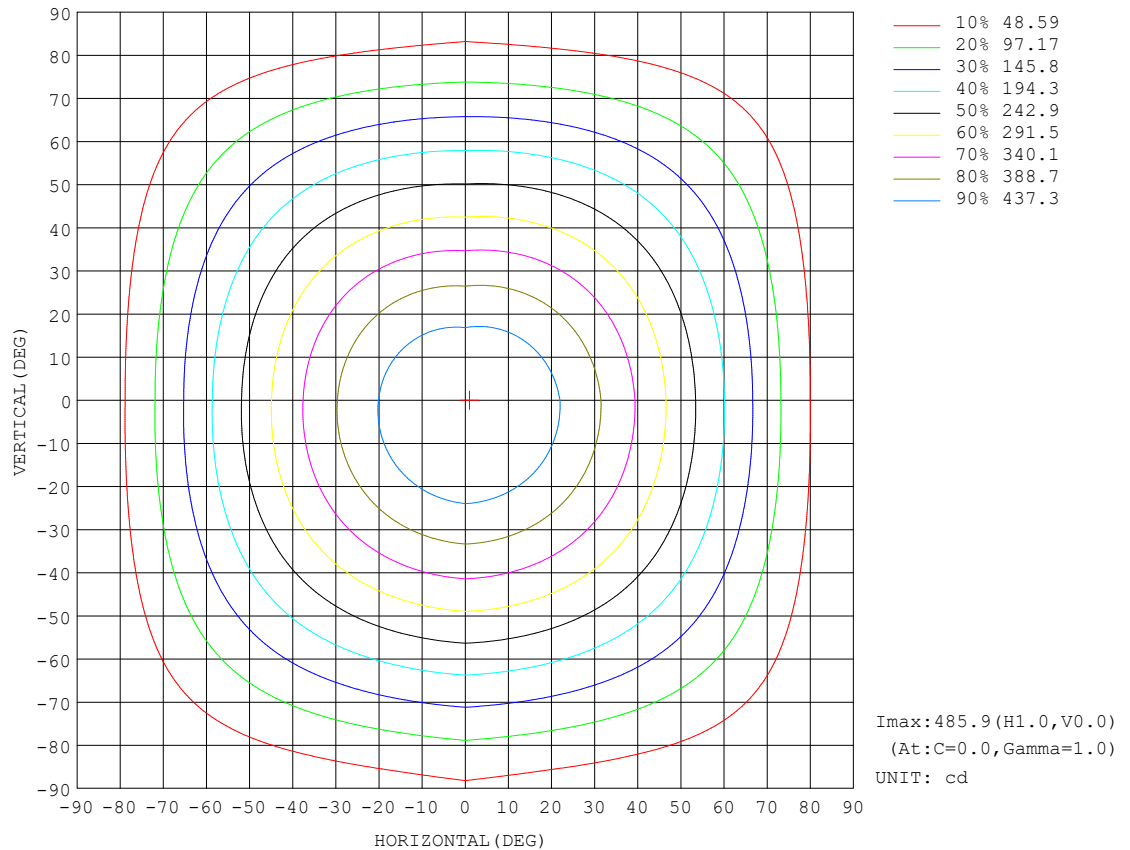
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	53	43	37	30
0.80	66	54	46	64	53	46	62	52	46	38
1.00	74	62	55	72	62	55	70	63	54	46
1.25	81	70	63	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	80	72	66	58
2.00	92	83	77	90	82	76	86	79	74	65
2.50	96	88	82	94	86	81	89	83	78	68
3.00	100	92	87	97	91	85	92	87	82	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:2023-08-09

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:

ISOCANDELA DIAGRAM

Test:U:24.001V I:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

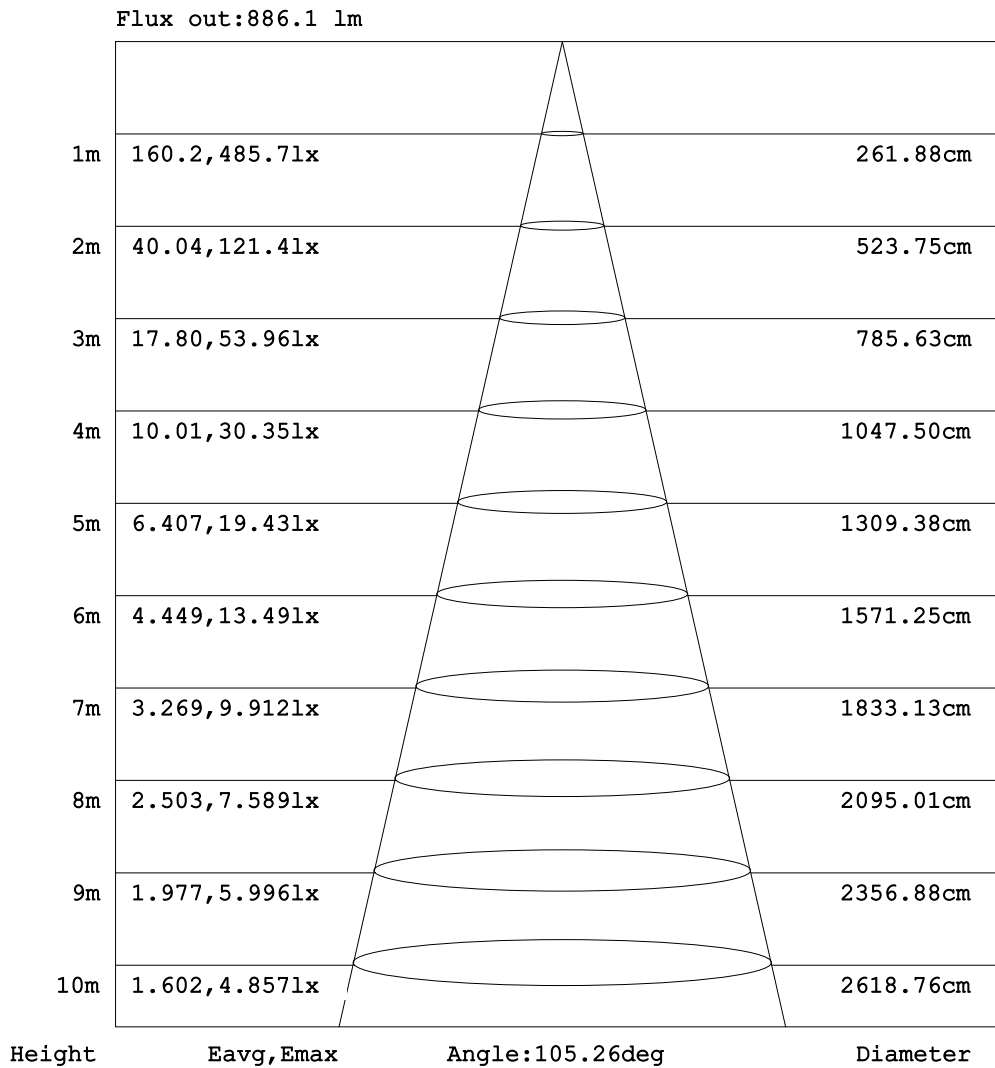


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JZ
Test Date: 2023-08-09

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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:



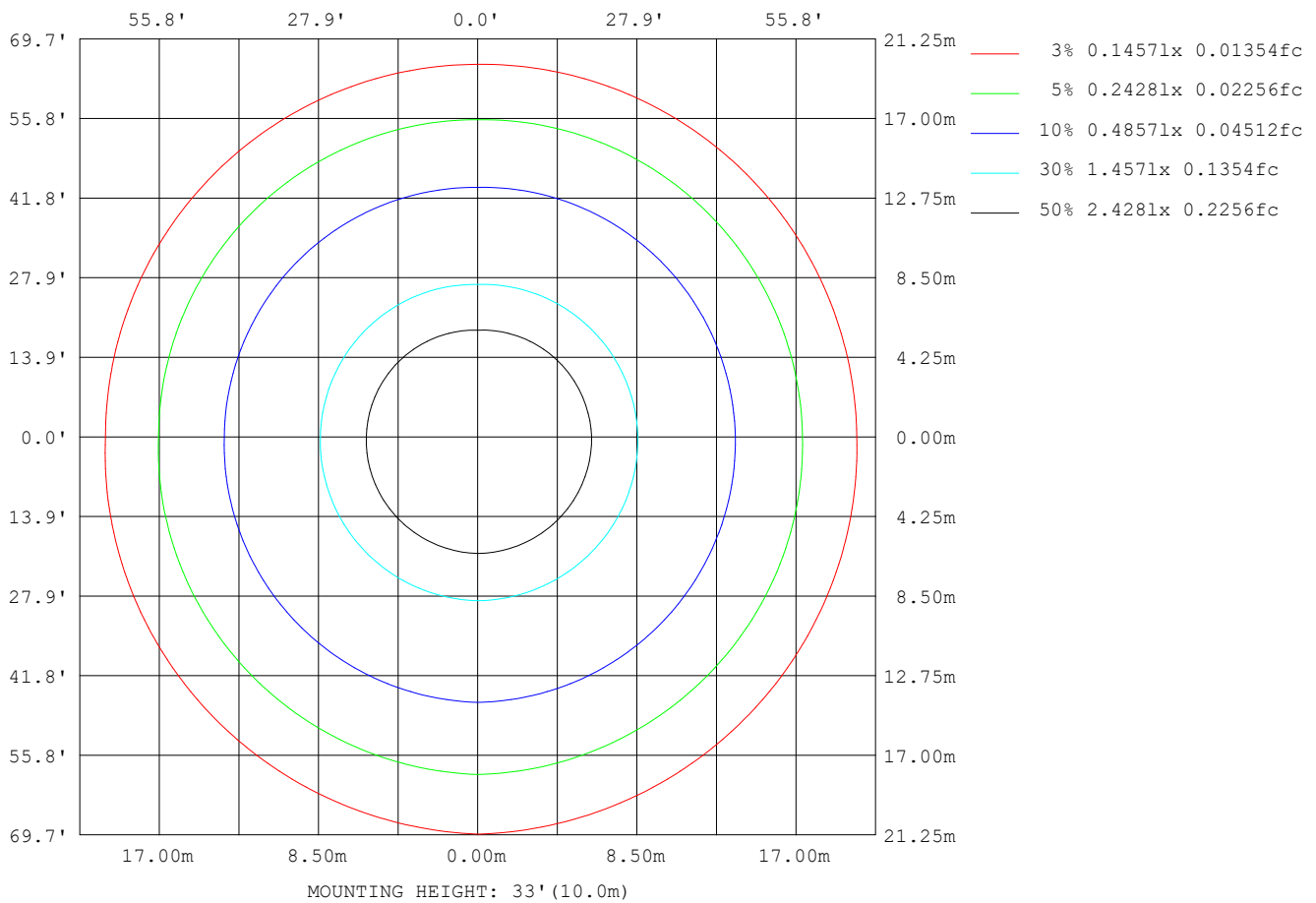
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*1.2	Shielding Angle:

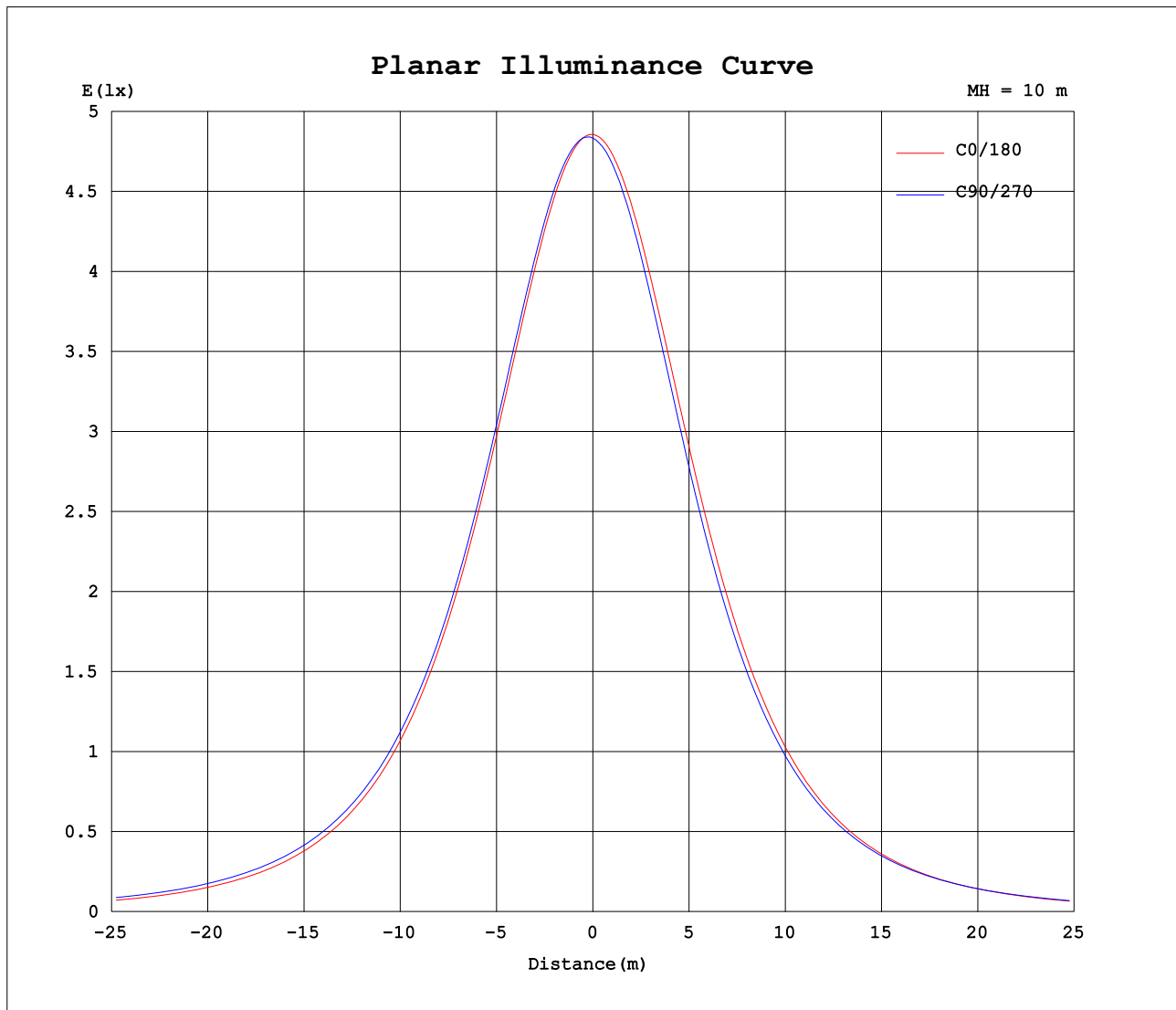
AvgL	cd/m2
L_0~180 (65) av	30155
L_0~180 (75) av	25556
L_0~180 (85) av	15427
L_90~270 (65) av	33167
L_90~270 (75) av	34053
L_90~270 (85) av	50410
L_45 (65) av	31974
L_45 (75) av	30779
L_45 (85) av	37132

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

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:0.6848A P:16.436W PF:1.0000 Freq:0Hz Lamp Flux:1413.49x1 lm		
NAME: RIBDC-47-40K-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	486	483	486	483															
5	484	485	482	476															
10	476	481	472	463															
15	464	470	458	445															
20	446	454	438	423															
25	423	433	414	397															
30	397	407	387	368															
35	368	379	357	338															
40	336	349	324	307															
45	302	317	291	275															
50	267	285	256	244															
55	232	252	221	212															
60	195	219	184	181															
65	158	186	148	150															
70	121	154	111	120															
75	83.8	122	75.0	90.0															
80	48.7	90.5	41.1	61.2															
85	18.8	62.8	13.5	42.6															
90	1.79	42.8	0.88	36.9															
95	0.56	38.1	0.73	35.8															
100	0.58	37.1	0.69	35.7															
105	0.69	36.9	0.81	35.5															
110	0.79	36.4	0.94	35.0															
115	0.92	35.5	1.07	34.1															
120	1.02	34.3	1.22	32.9															
125	1.17	32.8	1.37	31.4															
130	1.31	30.8	1.52	29.6															
135	1.40	28.6	1.65	26.4															
140	1.55	25.4	1.76	23.2															
145	1.67	13.9	1.87	14.2															
150	1.77	2.84	1.98	3.07															
155	1.90	2.71	2.06	2.48															
160	1.99	2.60	2.18	2.58															
165	2.07	2.49	2.24	2.33															
170	2.13	2.30	2.30	2.31															
175	2.20	2.28	2.31	2.29															
180	2.33	2.28	2.32	2.19															

C Range: 0 - 360DEG
C Interval: 90.0DEG
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