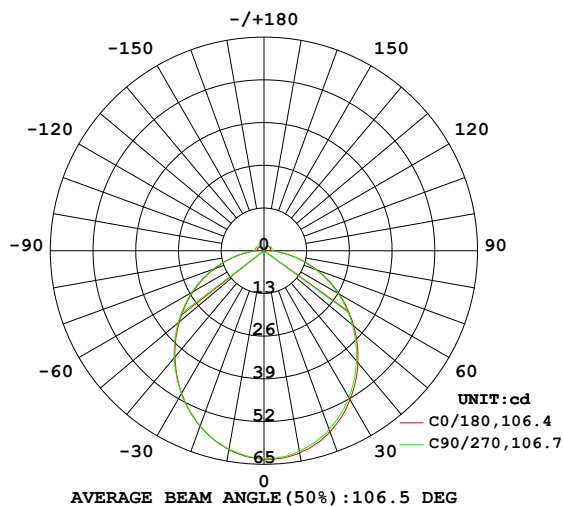


LUMINAIRE PHOTOMETRIC TEST REPORT

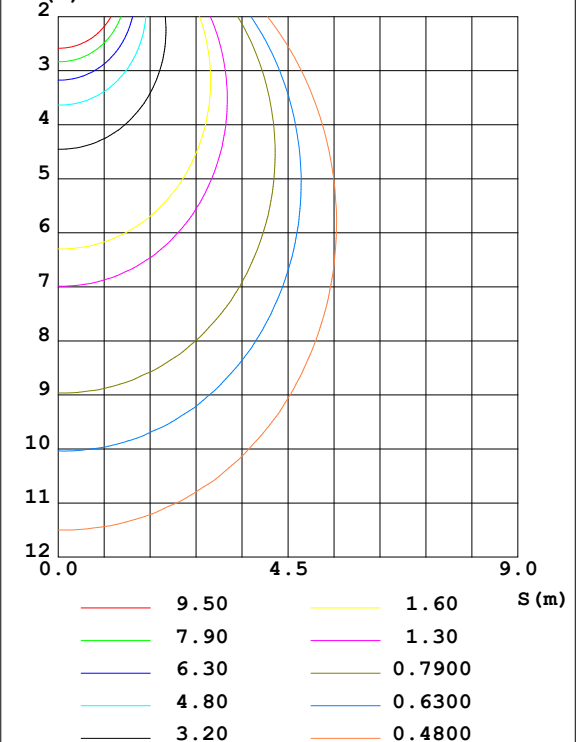
Test:U:24.001V I:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 82.38 lm/W			
MODEL	L Type	Imax(cd)	63.49	S/MH(C0/180)	1.18
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.19
RATED VOLTAGE(V)		TOTAL FLUX(lm)	185.66	η UP,DN(C0-180)	3.2,47.6
NOMINAL FLUX(lm)	185.663	CIE CLASS	DIRECT	η UP,DN(C180-360)	3.2,46.0
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:2023-08-08

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:

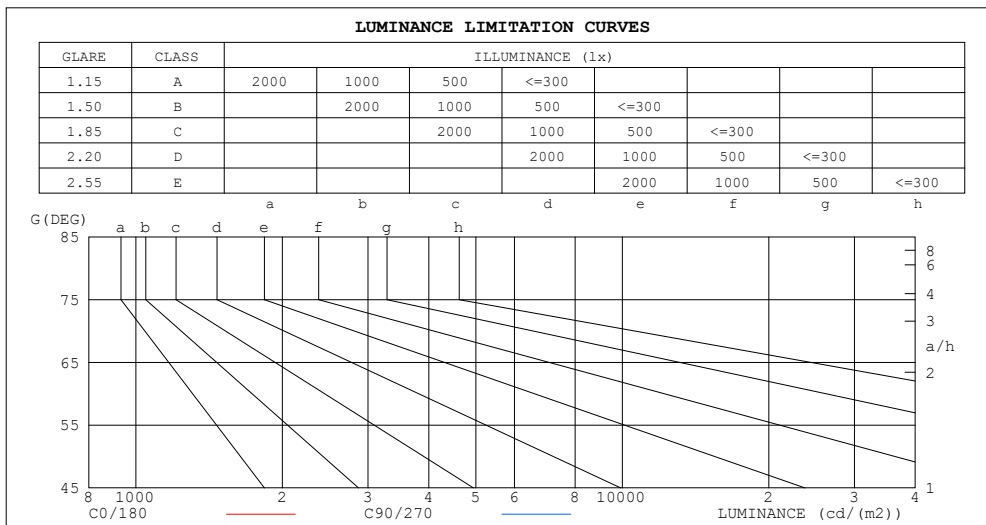
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	62.47	62.01	61.44	61.34					0- 10	5.971	5.971	3.22,3.22
20	58.64	57.92	56.77	56.84					10- 20	16.91	22.88	12.3,12.3
30	52.29	51.62	50.14	50.27					20- 30	25.12	48.01	25.9,25.9
40	44.45	43.79	42.15	42.50					30- 40	29.58	77.59	41.8,41.8
50	35.64	35.11	33.67	34.06					40- 50	30.09	107.7	58,58
60	26.46	26.02	24.90	25.37					50- 60	26.99	134.7	72.5,72.5
70	17.12	16.75	16.10	16.61					60- 70	20.95	155.6	83.8,83.8
80	8.248	7.937	7.739	8.184					70- 80	12.92	168.5	90.8,90.8
90	2.566	2.611	2.522	2.859					80- 90	5.262	173.8	93.6,93.6
100	1.958	2.525	2.092	2.644					90-100	2.516	176.3	95,95
110	2.134	2.500	1.995	2.625					100-110	2.458	178.8	96.3,96.3
120	2.118	2.340	1.926	2.476					110-120	2.253	181.0	97.5,97.5
130	2.069	2.106	1.724	2.255					120-130	1.926	183.0	98.5,98.5
140	1.811	1.340	1.498	1.861					130-140	1.474	184.4	99.3,99.3
150	1.516	0.6081	1.145	0.2927					140-150	0.7316	185.2	99.7,99.7
160	0.8012	0.4641	0.6278	0.2800					150-160	0.3379	185.5	99.9,99.9
170	0.4439	0.3281	0.3620	0.2674					160-170	0.1289	185.6	100,100
180	0.3202	0.2586	0.3079	0.2710					170-180	0.0311	185.7	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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	53921	50528
80	47500	45709
75	48391	47229
70	50047	48987
65	51637	50604
60	52930	52032
55	54172	53368
50	55449	54614
45	56727	55970

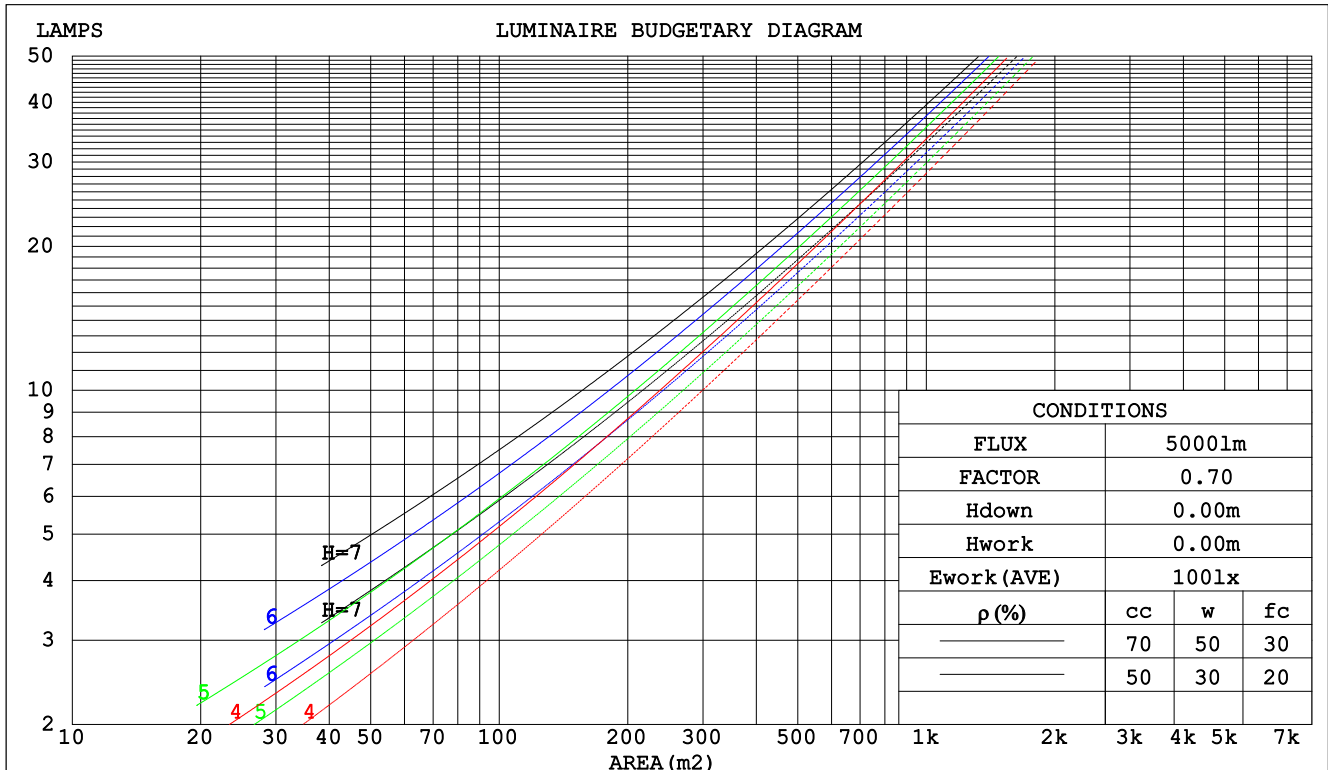
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	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	.65	.60	.68	.63	.58	.65	.60	.57	.54
4.0	.69	.60	.53	.67	.59	.53	.64	.57	.51	.61	.55	.50	.58	.53	.49	.46
5.0	.62	.53	.46	.60	.52	.45	.57	.50	.44	.55	.48	.43	.52	.47	.42	.40
6.0	.55	.47	.40	.54	.46	.40	.52	.44	.39	.49	.43	.38	.47	.42	.37	.35
7.0	.50	.42	.35	.49	.41	.35	.47	.40	.34	.45	.39	.34	.43	.37	.33	.31
8.0	.46	.37	.32	.45	.37	.31	.43	.36	.31	.41	.35	.30	.40	.34	.30	.28
9.0	.42	.34	.28	.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	.28	.24	.23



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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz		
Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	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	.309	.176	.056	.292	.167	.053	.276	.159	.051	.262	.152	.049		
2.0	.294	.161	.049	.286	.157	.048	.271	.150	.047	.257	.144	.045	.244	.138	.043		
3.0	.270	.144	.043	.263	.141	.042	.249	.135	.041	.237	.130	.040	.225	.125	.039		
4.0	.248	.129	.038	.241	.126	.037	.229	.122	.036	.218	.117	.035	.208	.113	.034		
5.0	.229	.116	.034	.223	.114	.033	.212	.110	.033	.202	.107	.032	.192	.103	.031		
6.0	.212	.106	.030	.207	.104	.030	.197	.101	.029	.188	.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	.180	.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	.078	.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	.239	.239	.239	.204	.204	.204	.139	.139	.139	.080	.080	.080	.026	.026	.026	
1.0	.230	.205	.183	.197	.176	.157	.135	.121	.109	.077	.070	.063	.025	.023	.020	
2.0	.222	.181	.147	.190	.156	.127	.130	.108	.089	.075	.063	.052	.024	.020	.017	
3.0	.214	.164	.124	.184	.141	.107	.126	.098	.075	.073	.057	.044	.023	.019	.015	
4.0	.206	.151	.108	.177	.130	.094	.122	.091	.066	.070	.053	.039	.023	.017	.013	
5.0	.199	.141	.097	.171	.122	.085	.118	.085	.060	.068	.050	.036	.022	.016	.012	
6.0	.192	.132	.090	.165	.115	.078	.114	.080	.055	.066	.047	.033	.021	.015	.011	
7.0	.185	.125	.084	.159	.109	.073	.110	.076	.052	.064	.045	.031	.021	.015	.010	
8.0	.179	.120	.079	.154	.104	.069	.106	.073	.049	.062	.043	.029	.020	.014	.010	
9.0	.173	.115	.076	.149	.100	.066	.103	.070	.047	.060	.041	.028	.019	.014	.009	
10.0	.167	.111	.073	.144	.096	.064	.100	.068	.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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz										
Lamp Flux:185.663x1 lm										
NAME: RIBDC-LL-40K-AM					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: RAYHIL					SUR.: 0.01*0.1			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	32.2	33.6	32.6	34.0	34.3	32.2	33.6	32.5	33.9	34.2
3H	33.8	35.1	34.2	35.5	35.8	33.7	35.0	34.1	35.4	35.7
4H	34.5	35.7	34.9	36.1	36.5	34.4	35.6	34.8	36.0	36.4
6H	35.0	36.2	35.4	36.6	37.0	34.9	36.1	35.3	36.5	36.9
8H	35.2	36.4	35.7	36.8	37.2	35.1	36.2	35.5	36.6	37.1
12H	35.4	36.5	35.8	36.9	37.3	35.3	36.4	35.7	36.8	37.2
4H 2H	32.8	34.1	33.2	34.4	34.8	32.8	34.0	33.2	34.4	34.8
3H	34.6	35.7	35.0	36.1	36.5	34.5	35.6	35.0	36.0	36.5
4H	35.4	36.4	35.9	36.8	37.3	35.3	36.3	35.8	36.7	37.2
6H	36.1	37.0	36.6	37.4	37.9	36.0	36.9	36.5	37.3	37.8
8H	36.3	37.2	36.9	37.6	38.2	36.2	37.1	36.7	37.5	38.1
12H	36.6	37.4	37.1	37.8	38.4	36.5	37.2	37.0	37.7	38.3
8H 4H	35.7	36.5	36.2	37.0	37.5	35.6	36.4	36.1	36.9	37.4
6H	36.5	37.2	37.1	37.7	38.3	36.4	37.1	37.0	37.6	38.2
8H	36.9	37.5	37.5	38.1	38.6	36.8	37.4	37.4	37.9	38.5
12H	37.3	37.8	37.9	38.4	39.0	37.2	37.7	37.7	38.2	38.8
12H 4H	35.7	36.4	36.2	36.9	37.5	35.6	36.4	36.1	36.9	37.4
6H	36.6	37.2	37.2	37.7	38.3	36.5	37.1	37.1	37.7	38.2
8H	37.0	37.6	37.6	38.1	38.7	36.9	37.5	37.5	38.0	38.6
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, 185.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -5.9)
Area: 0.001 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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

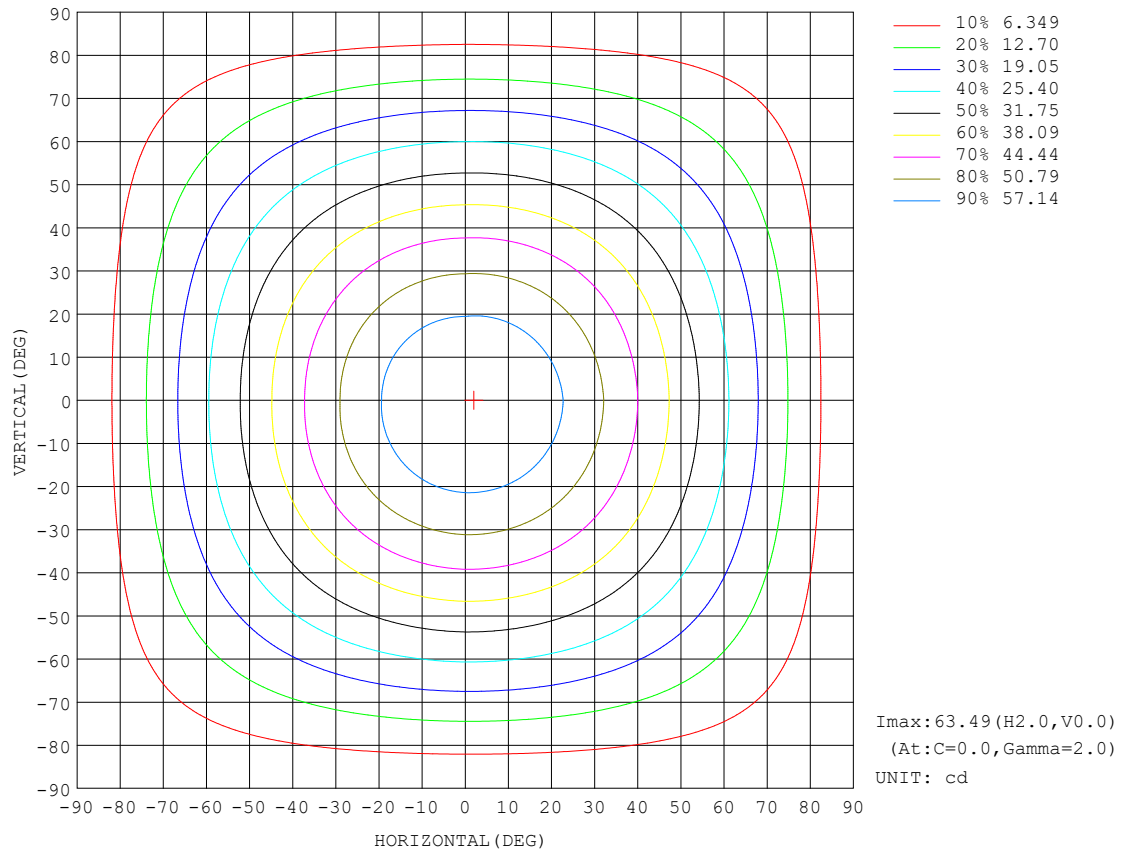
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	53	43	37	30
0.80	65	54	46	64	53	46	62	52	46	38
1.00	74	62	55	72	62	54	69	62	54	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	80	72	66	57
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:2023-08-08

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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

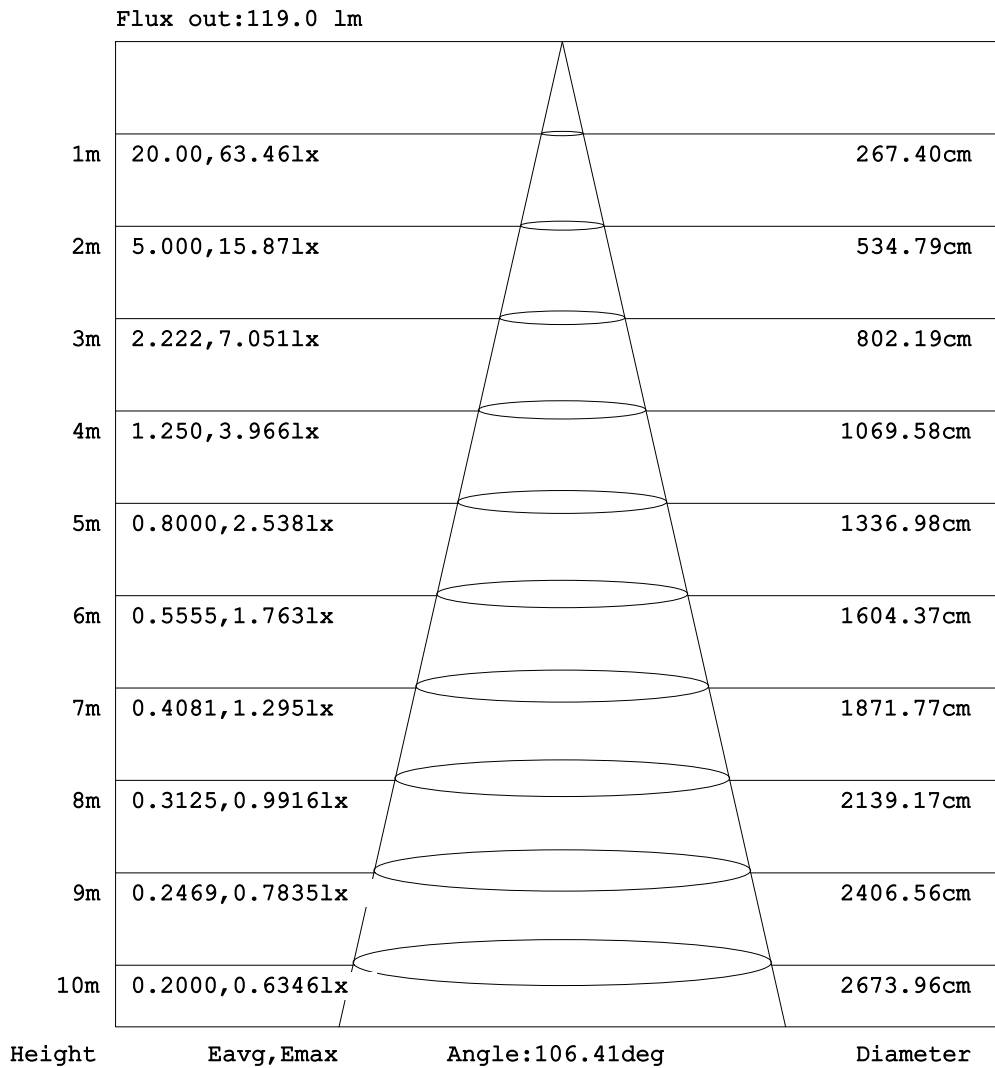


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:



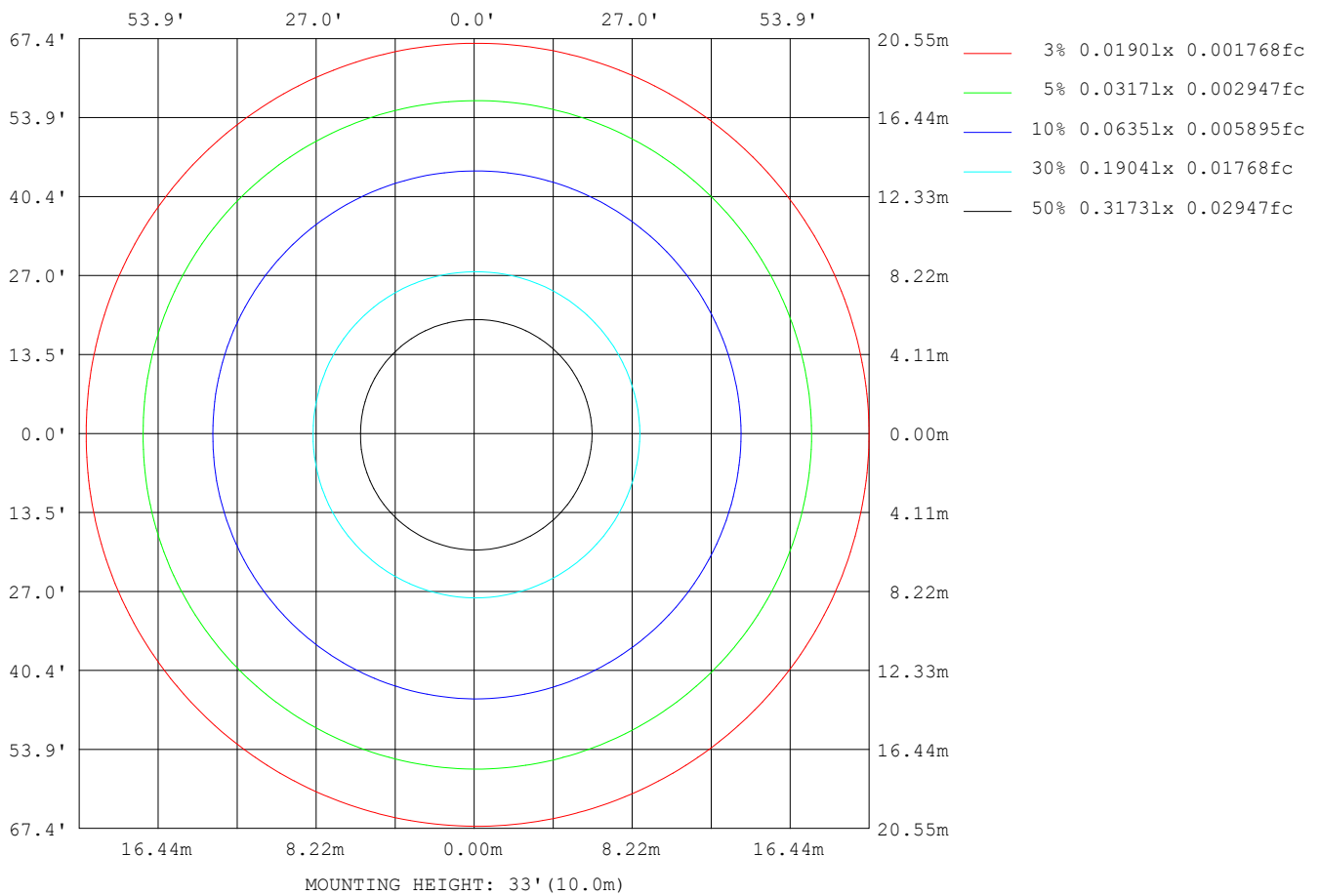
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

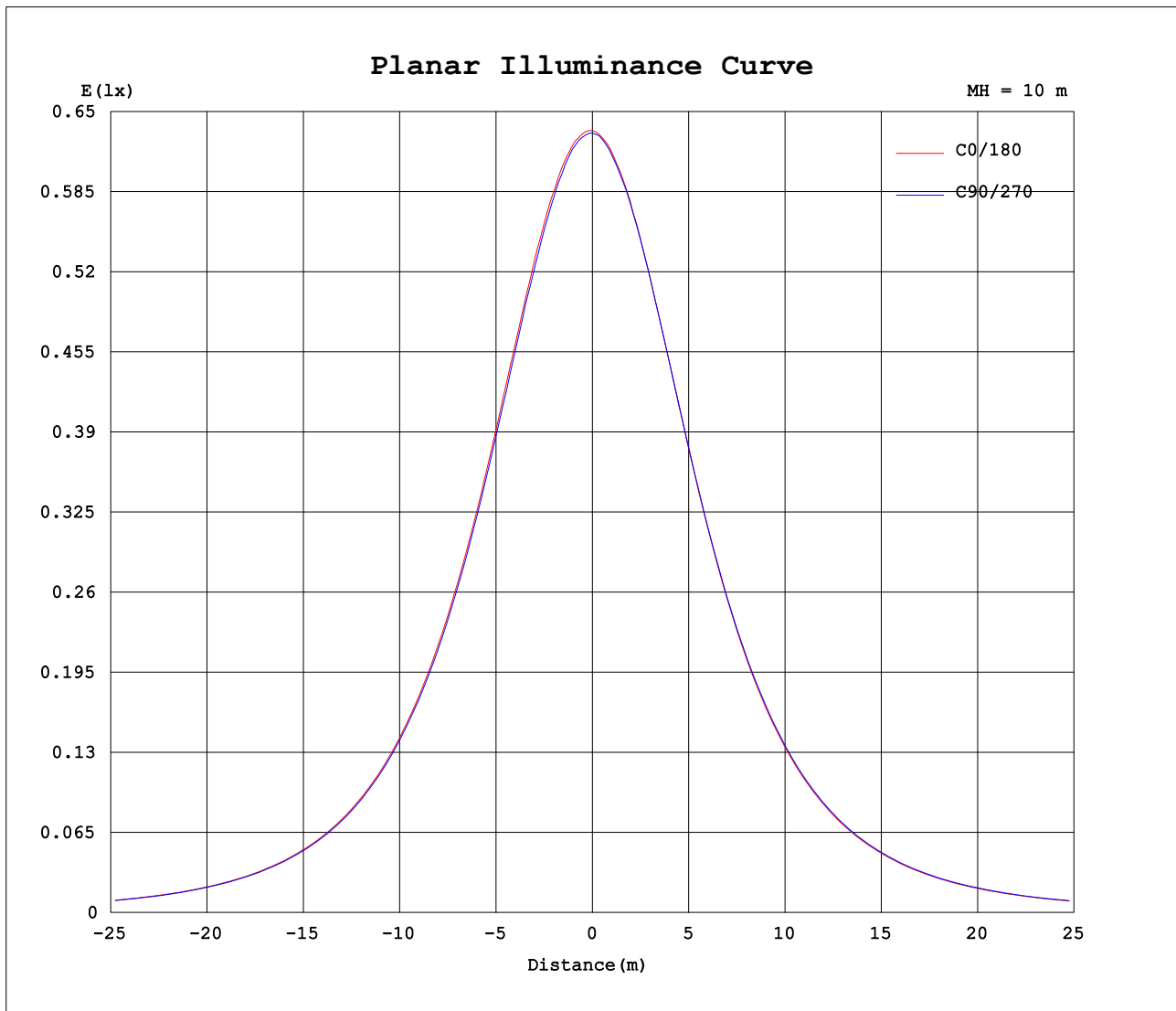
AvgL	cd/m2
L_0~180 (65) av	50098
L_0~180 (75) av	46972
L_0~180 (85) av	52220
L_90~270 (65) av	50141
L_90~270 (75) av	47256
L_90~270 (85) av	52500
L_45 (65) av	50029
L_45 (75) av	47061
L_45 (85) av	52289

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:0.0939A P:2.2537W PF:1.0000 Freq:0Hz Lamp Flux:185.663x1 lm		
NAME: RIBDC-LL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	63.5	63.2	63.5	63.2														
5	63.4	63.0	62.8	62.6														
10	62.5	62.0	61.4	61.3														
15	60.9	60.3	59.4	59.4														
20	58.6	57.9	56.8	56.8														
25	55.8	55.0	53.7	53.8														
30	52.3	51.6	50.1	50.3														
35	48.6	47.9	46.3	46.5														
40	44.4	43.8	42.1	42.5														
45	40.1	39.6	37.9	38.4														
50	35.6	35.1	33.7	34.1														
55	31.1	30.6	29.3	29.7														
60	26.5	26.0	24.9	25.4														
65	21.8	21.4	20.5	21.0														
70	17.1	16.8	16.1	16.6														
75	12.5	12.2	11.8	12.2														
80	8.25	7.94	7.74	8.18														
85	4.70	4.40	4.40	4.75														
90	2.57	2.61	2.52	2.86														
95	1.64	2.54	2.14	2.66														
100	1.96	2.52	2.09	2.64														
105	2.10	2.52	2.07	2.63														
110	2.13	2.50	2.00	2.63														
115	2.13	2.41	1.95	2.57														
120	2.12	2.34	1.93	2.48														
125	2.11	2.25	1.81	2.44														
130	2.07	2.11	1.72	2.25														
135	1.96	1.96	1.60	2.19														
140	1.81	1.34	1.50	1.86														
145	1.69	0.68	1.32	0.67														
150	1.52	0.61	1.15	0.29														
155	1.08	0.54	0.96	0.29														
160	0.80	0.46	0.63	0.28														
165	0.64	0.39	0.46	0.27														
170	0.44	0.33	0.36	0.27														
175	0.36	0.30	0.33	0.26														
180	0.32	0.26	0.31	0.27														

C Range: 0 - 360DEG
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
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Remarks: