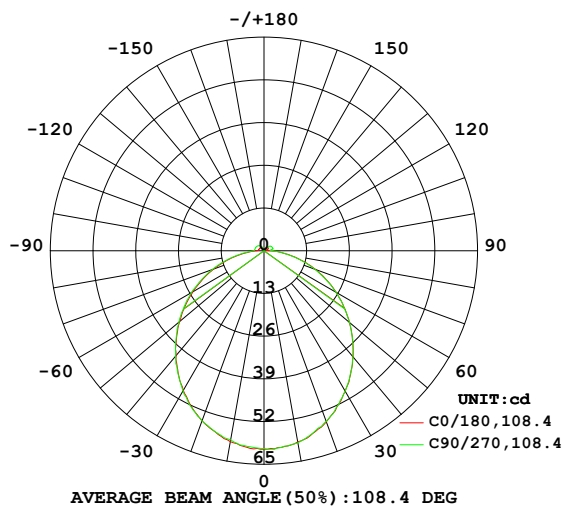


LUMINAIRE PHOTOMETRIC TEST REPORT

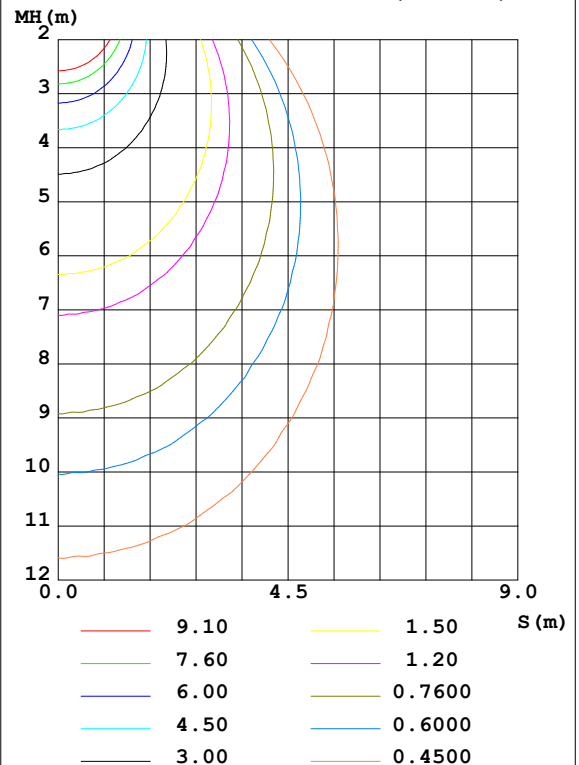
Test:U:24.001V I:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 81.22 lm/W			
MODEL	L Type	I _{max} (cd)	60.47	S/MH (C0/180)	1.21
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.22
RATED VOLTAGE (V)		TOTAL FLUX (lm)	180.12	η UP, DN (C0-180)	2.7, 47.1
NOMINAL FLUX (lm)	180.124	CIE CLASS	DIRECT	η UP, DN (C180-360)	3.2, 47.0
LAMPS INSIDE	1	η up (%)	5.9	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	94.1	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:

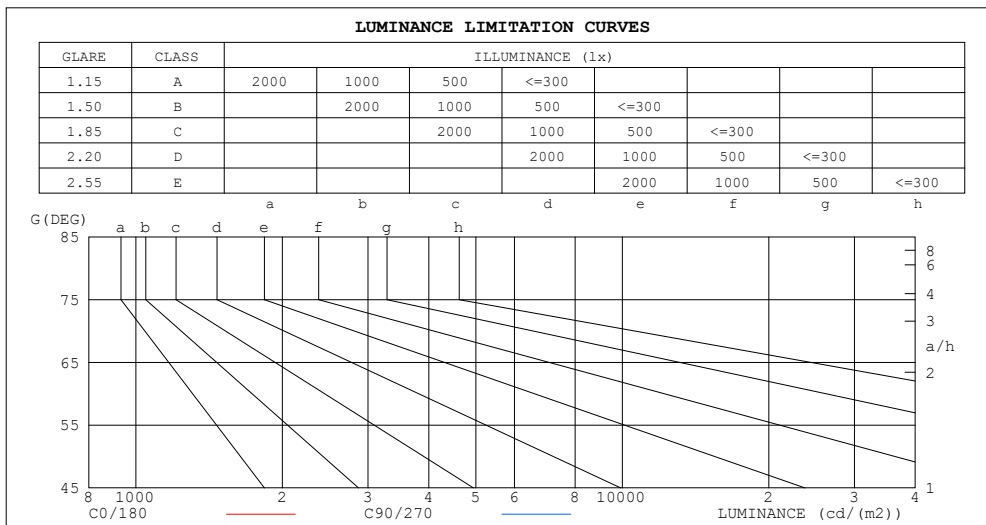
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	59.06	59.42	59.00	58.48					0- 10	5.694	5.694	3.16,3.16
20	55.39	55.28	55.09	55.11					10- 20	16.17	21.87	12.1,12.1
30	49.47	49.35	49.12	49.28					20- 30	24.16	46.03	25.6,25.6
40	42.14	42.13	41.61	41.86					30- 40	28.62	74.65	41.4,41.4
50	33.93	34.00	33.53	33.78					40- 50	29.28	103.9	57.7,57.7
60	25.42	25.28	25.02	25.51					50- 60	26.46	130.4	72.4,72.4
70	16.71	16.46	16.35	16.77					60- 70	20.68	151.1	83.9,83.9
80	8.187	7.926	7.985	8.578					70- 80	12.96	164.0	91.1,91.1
90	2.516	2.796	2.471	3.142					80- 90	5.417	169.4	94.1,94.1
100	0.9380	2.404	1.675	2.845					90-100	2.370	171.8	95.4,95.4
110	1.071	2.771	1.571	2.759					100-110	2.135	174.0	96.6,96.6
120	1.612	2.599	1.512	2.623					110-120	2.042	176.0	97.7,97.7
130	1.552	2.129	1.404	2.365					120-130	1.802	177.8	98.7,98.7
140	1.367	0.4251	1.256	2.020					130-140	1.179	179.0	99.4,99.4
150	0.8504	0.3529	0.9976	1.540					140-150	0.7099	179.7	99.8,99.8
160	0.4929	0.2807	0.7511	0.2916					150-160	0.2996	180.0	99.9,99.9
170	0.3523	0.2819	0.3568	0.2795					160-170	0.1091	180.1	100,100
180	0.3079	0.2833	0.2956	0.2710					170-180	0.0289	180.1	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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-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	54071	51240
80	47147	45641
75	47675	46658
70	48853	48122
65	49656	49292
60	50833	50553
55	51703	51673
50	52784	52888
45	53800	54054

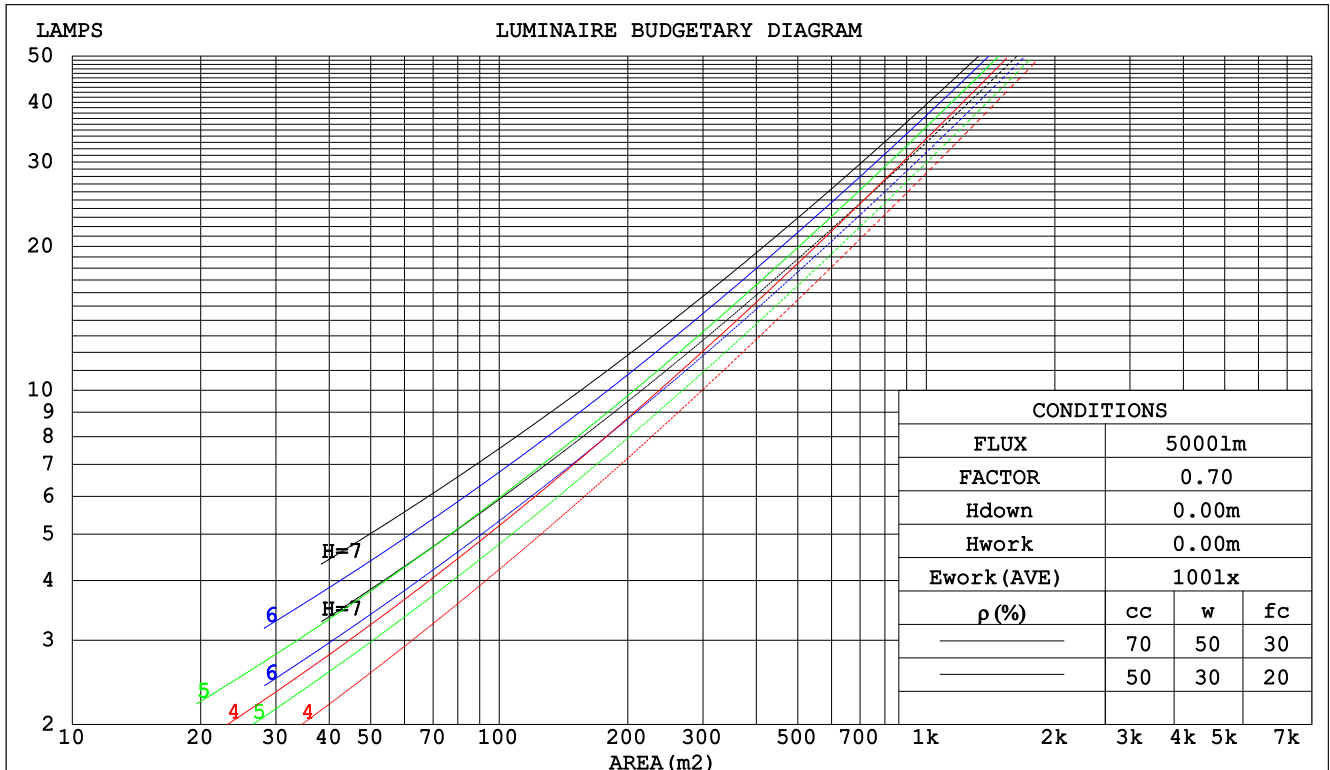
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-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	.97	.97	.97	.94
1.0	1.02	.97	.93	.99	.95	.91	.94	.90	.87	.89	.86	.84	.84	.82	.80	.78
2.0	.89	.82	.76	.86	.80	.74	.82	.76	.72	.77	.73	.69	.74	.70	.67	.64
3.0	.78	.69	.63	.76	.68	.62	.72	.65	.60	.68	.63	.58	.65	.60	.56	.54
4.0	.69	.60	.53	.67	.59	.52	.64	.57	.51	.61	.55	.50	.58	.53	.48	.46
5.0	.61	.52	.46	.60	.51	.45	.57	.50	.44	.55	.48	.43	.52	.47	.42	.40
6.0	.55	.46	.40	.54	.46	.39	.52	.44	.39	.49	.43	.38	.47	.41	.37	.35
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.45	.38	.34	.43	.37	.33	.31
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.31	.41	.35	.30	.40	.34	.29	.27
9.0	.42	.34	.28	.41	.33	.28	.40	.32	.28	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.26	.38	.30	.25	.37	.30	.25	.35	.29	.25	.34	.28	.24	.22



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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz		
Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-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	.321	.183	.058	.313	.178	.057	.296	.170	.054	.281	.162	.052	.266	.154	.050	
2.0	.296	.162	.050	.288	.159	.049	.274	.152	.047	.260	.146	.046	.247	.140	.044	
3.0	.272	.145	.043	.265	.142	.043	.251	.136	.041	.239	.131	.040	.228	.126	.039	
4.0	.250	.130	.038	.243	.127	.038	.231	.123	.037	.220	.118	.036	.210	.114	.035	
5.0	.230	.117	.034	.224	.115	.034	.214	.111	.033	.204	.107	.032	.194	.104	.031	
6.0	.213	.107	.031	.208	.105	.030	.198	.102	.030	.189	.098	.029	.181	.095	.028	
7.0	.198	.098	.028	.193	.096	.027	.185	.093	.027	.176	.090	.026	.169	.088	.026	
8.0	.185	.090	.025	.180	.089	.025	.173	.086	.025	.165	.084	.024	.158	.081	.024	
9.0	.173	.084	.023	.169	.082	.023	.162	.080	.023	.155	.078	.022	.149	.076	.022	
10.0	.162	.078	.022	.159	.077	.021	.152	.075	.021	.146	.073	.021	.140	.071	.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	.236	.236	.236	.201	.201	.201	.137	.137	.137	.079	.079	.079	.025	.025	.025	
1.0	.227	.202	.179	.194	.173	.154	.133	.119	.107	.076	.069	.062	.024	.022	.020	
2.0	.219	.178	.143	.187	.153	.124	.128	.106	.086	.074	.062	.051	.024	.020	.017	
3.0	.211	.160	.120	.181	.138	.104	.124	.096	.073	.072	.056	.043	.023	.018	.014	
4.0	.203	.147	.105	.174	.127	.091	.120	.089	.064	.069	.052	.038	.022	.017	.012	
5.0	.196	.137	.094	.168	.119	.081	.116	.083	.058	.067	.049	.034	.022	.016	.011	
6.0	.189	.129	.086	.162	.112	.075	.112	.078	.053	.065	.046	.031	.021	.015	.010	
7.0	.182	.122	.080	.156	.106	.070	.108	.074	.049	.063	.044	.029	.020	.014	.010	
8.0	.175	.116	.076	.151	.101	.066	.104	.071	.047	.061	.042	.028	.020	.014	.009	
9.0	.169	.111	.072	.146	.097	.063	.101	.068	.045	.059	.040	.027	.019	.013	.009	
10.0	.164	.107	.069	.141	.093	.061	.098	.065	.043	.057	.039	.026	.018	.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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz										
Lamp Flux:180.124x1 lm										
NAME: RIBDC-RL-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	32.1	33.6	32.5	33.9	34.2	32.1	33.6	32.5	33.9	34.2
3H	33.8	35.1	34.1	35.4	35.8	33.7	35.1	34.1	35.4	35.8
4H	34.5	35.7	34.9	36.1	36.5	34.4	35.7	34.8	36.0	36.4
6H	35.0	36.2	35.4	36.6	37.0	35.0	36.1	35.4	36.5	36.9
8H	35.3	36.4	35.7	36.8	37.2	35.2	36.3	35.6	36.7	37.1
12H	35.5	36.6	35.9	37.0	37.4	35.4	36.5	35.8	36.9	37.3
4H 2H	32.7	34.0	33.1	34.4	34.7	32.7	34.0	33.1	34.4	34.7
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	36.4	35.8	36.8	37.2
6H	36.1	37.0	36.6	37.5	38.0	36.0	36.9	36.5	37.4	37.9
8H	36.4	37.2	36.9	37.7	38.2	36.3	37.2	36.8	37.6	38.1
12H	36.7	37.4	37.2	37.9	38.5	36.6	37.3	37.1	37.8	38.4
8H 4H	35.7	36.5	36.2	37.0	37.5	35.6	36.5	36.1	37.0	37.5
6H	36.6	37.3	37.1	37.8	38.3	36.5	37.2	37.1	37.7	38.3
8H	37.0	37.6	37.5	38.1	38.7	36.9	37.5	37.5	38.1	38.6
12H	37.4	37.9	38.0	38.5	39.1	37.3	37.8	37.9	38.4	39.0
12H 4H	35.7	36.5	36.2	37.0	37.5	35.7	36.4	36.2	36.9	37.5
6H	36.7	37.3	37.2	37.8	38.4	36.6	37.2	37.2	37.8	38.3
8H	37.1	37.7	37.7	38.2	38.8	37.1	37.6	37.6	38.1	38.7
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, 180.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -6.0)
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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

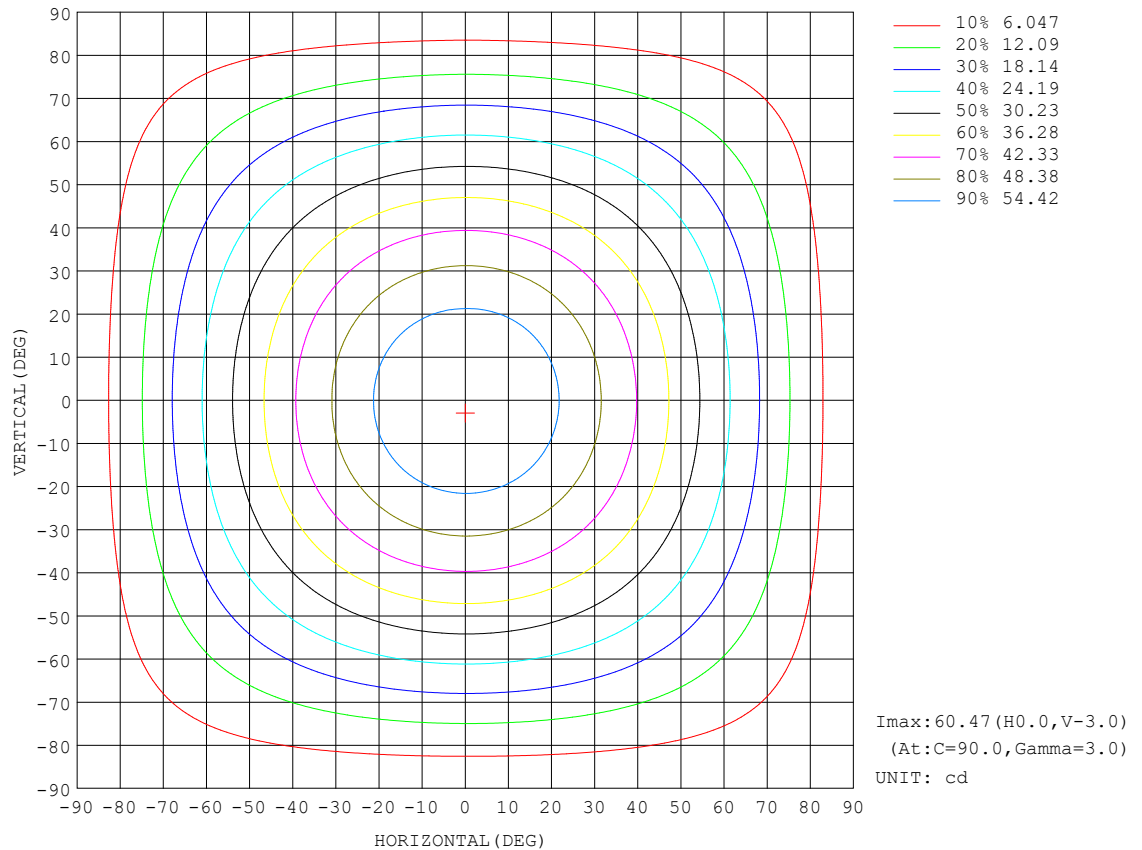
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	53	43	36	30
0.80	65	54	46	64	53	46	62	52	45	38
1.00	73	62	55	72	61	54	69	62	53	46
1.25	80	70	62	79	69	62	75	67	61	53
1.50	85	75	68	83	74	67	80	72	66	57
2.00	92	83	76	90	82	75	86	79	73	64
2.50	96	88	82	94	86	80	89	83	78	68
3.00	100	92	86	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:2023-08-08

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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

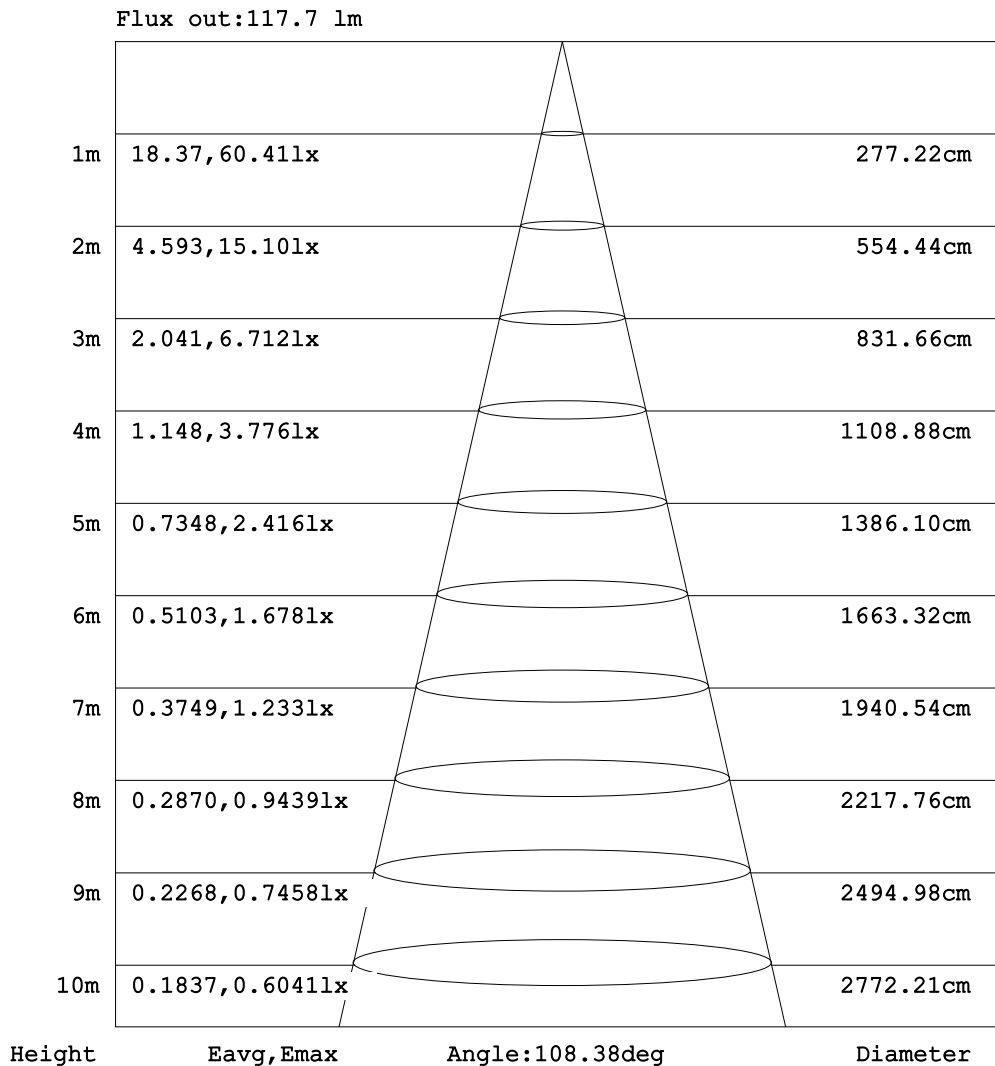


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:



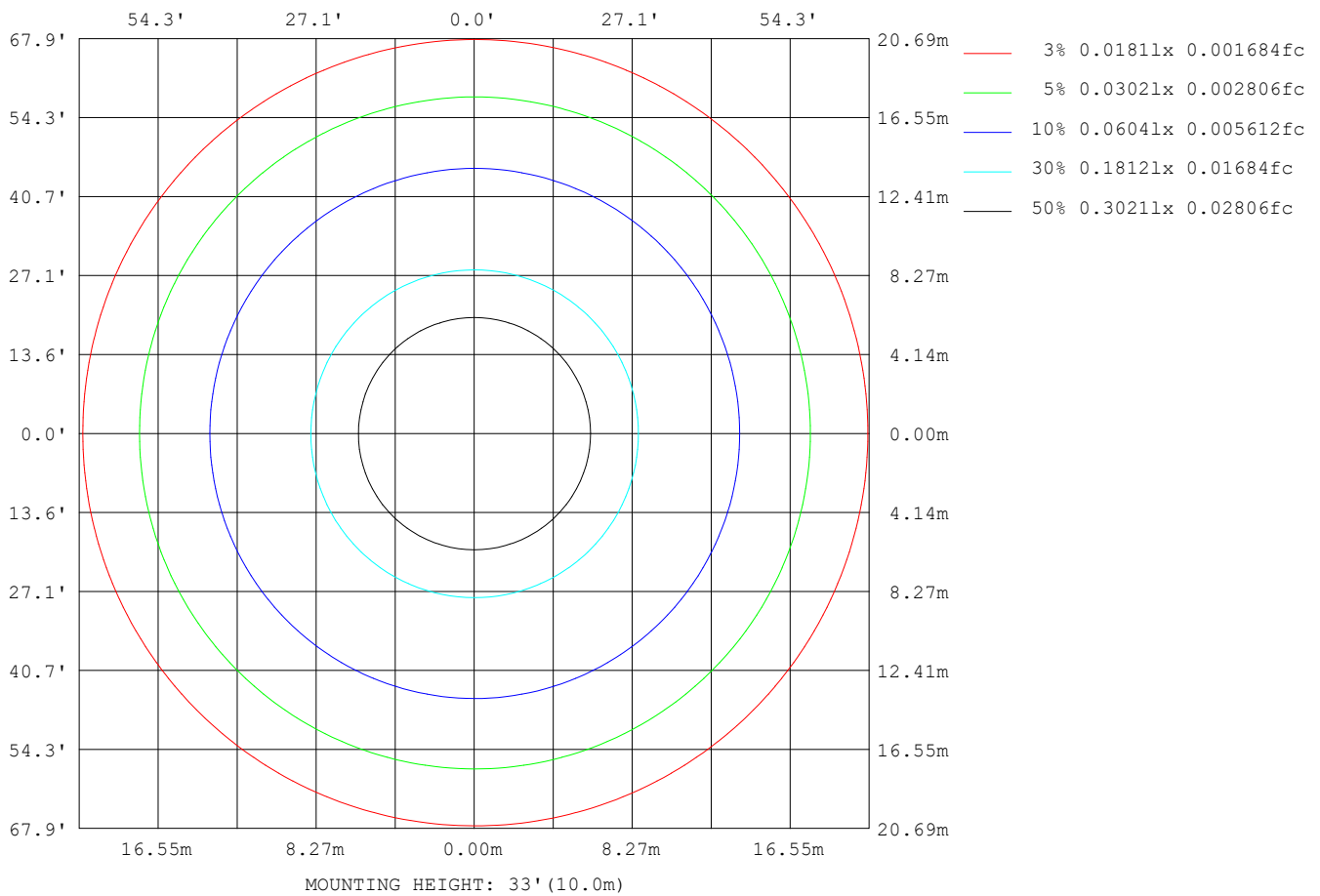
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

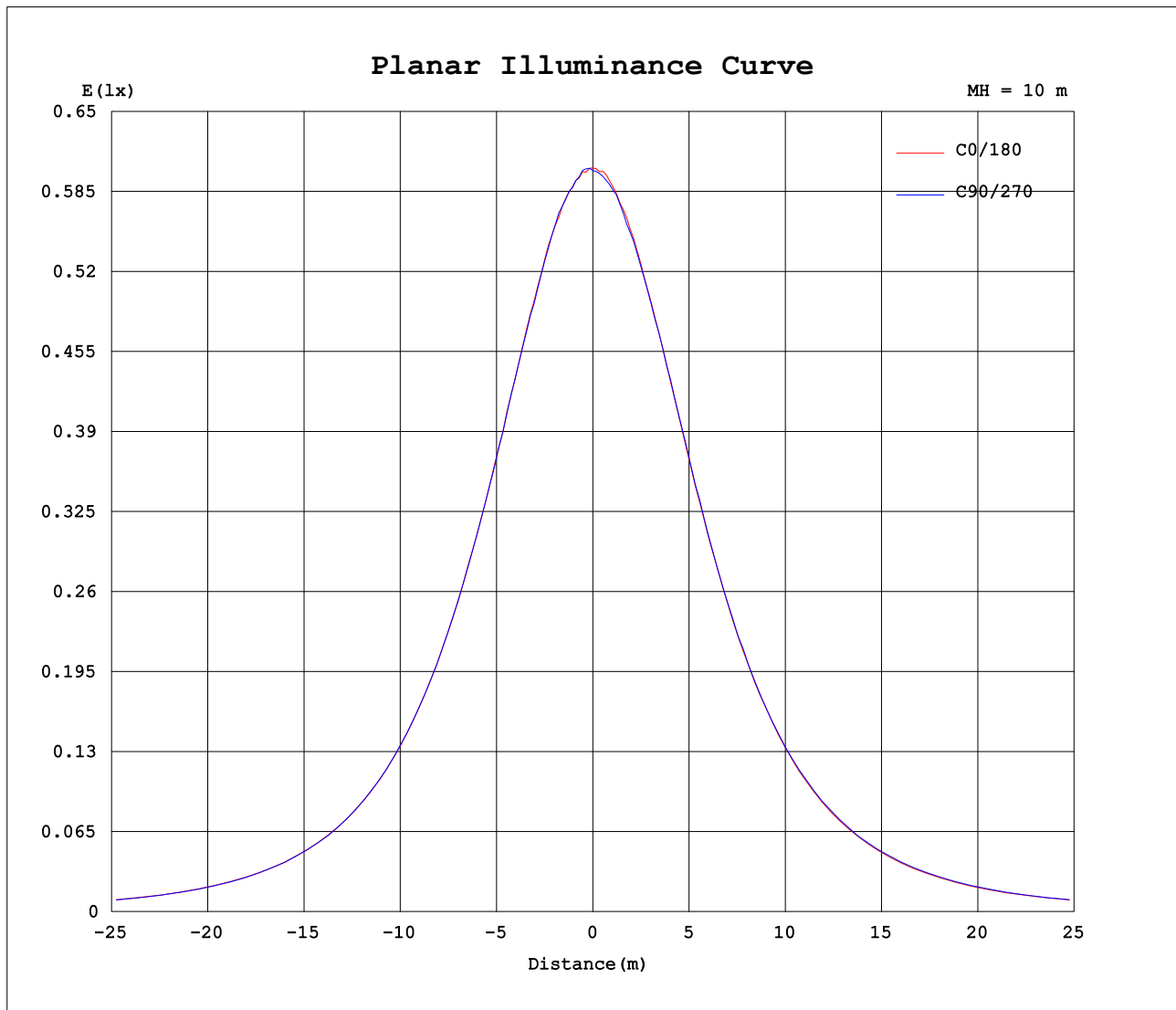
AvgL	cd/m2
L_0~180 (65) av	49196
L_0~180 (75) av	46996
L_0~180 (85) av	53209
L_90~270 (65) av	49530
L_90~270 (75) av	47756
L_90~270 (85) av	55044
L_45 (65) av	49376
L_45 (75) av	47428
L_45 (85) av	54302

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:0.0924A P:2.2177W PF:1.0000 Freq:0Hz Lamp Flux:180.124x1 lm		
NAME: RIBDC-RL-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	60.4	60.2	60.4	60.2															
5	60.1	60.1	60.0	59.7															
10	59.1	59.4	59.0	58.5															
15	57.5	57.5	57.2	57.1															
20	55.4	55.3	55.1	55.1															
25	52.4	52.4	52.3	52.5															
30	49.5	49.3	49.1	49.3															
35	46.0	45.8	45.6	45.7															
40	42.1	42.1	41.6	41.9															
45	38.0	38.2	37.7	37.8															
50	33.9	34.0	33.5	33.8															
55	29.7	29.6	29.3	29.7															
60	25.4	25.3	25.0	25.5															
65	21.0	20.8	20.6	21.0															
70	16.7	16.5	16.3	16.8															
75	12.3	12.1	12.0	12.6															
80	8.19	7.93	7.98	8.58															
85	4.71	4.47	4.56	5.13															
90	2.52	2.80	2.47	3.14															
95	1.35	1.85	1.81	2.91															
100	0.94	2.40	1.67	2.84															
105	0.70	2.84	1.60	2.81															
110	1.07	2.77	1.57	2.76															
115	1.27	2.70	1.56	2.71															
120	1.61	2.60	1.51	2.62															
125	1.59	2.51	1.50	2.51															
130	1.55	2.13	1.40	2.37															
135	1.47	0.90	1.34	2.19															
140	1.37	0.43	1.26	2.02															
145	1.23	0.39	1.12	1.81															
150	0.85	0.35	1.00	1.54															
155	0.64	0.32	0.94	0.40															
160	0.49	0.28	0.75	0.29															
165	0.41	0.27	0.52	0.29															
170	0.35	0.28	0.36	0.28															
175	0.32	0.29	0.31	0.27															
180	0.31	0.28	0.30	0.27															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
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Test Date:2023-08-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
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Remarks: