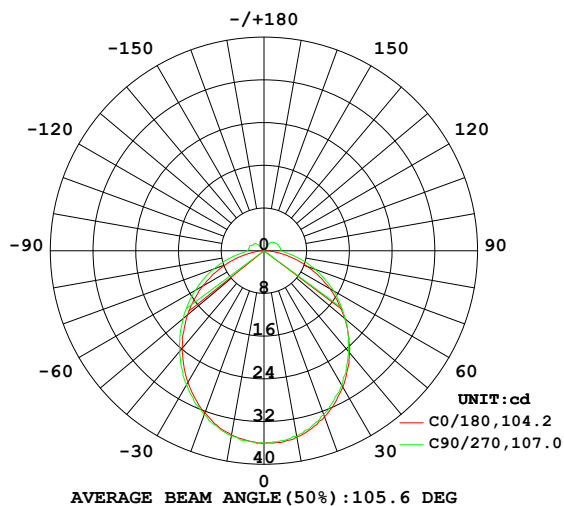


LUMINAIRE PHOTOMETRIC TEST REPORT

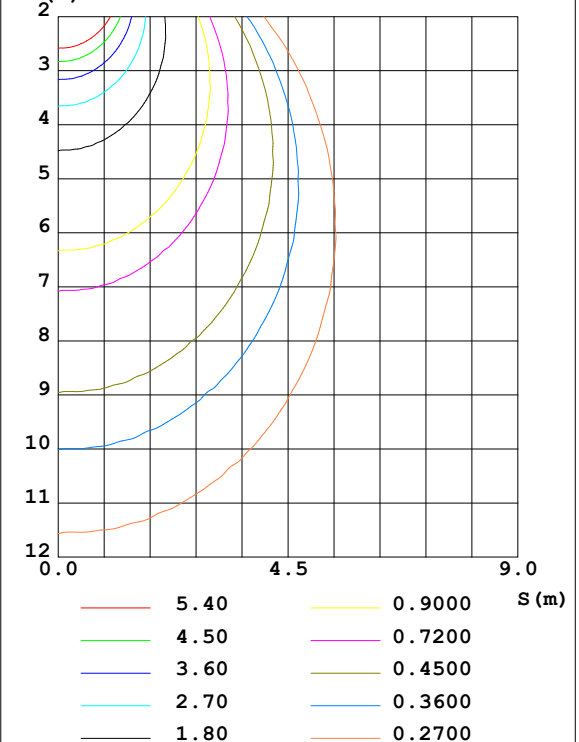
Test:U:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 79.75 lm/W			
MODEL		I _{max} (cd)	36.17	S/MH (C0/180)	1.18
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)		TOTAL FLUX (lm)	104.89	η UP,DN (C0-180)	3.5,47.5
NOMINAL FLUX (lm)	104.865	CIE CLASS	DIRECT	η UP,DN (C180-360)	3.1,46.0
LAMPS INSIDE	1	η up (%)	6.6	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	93.4	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:

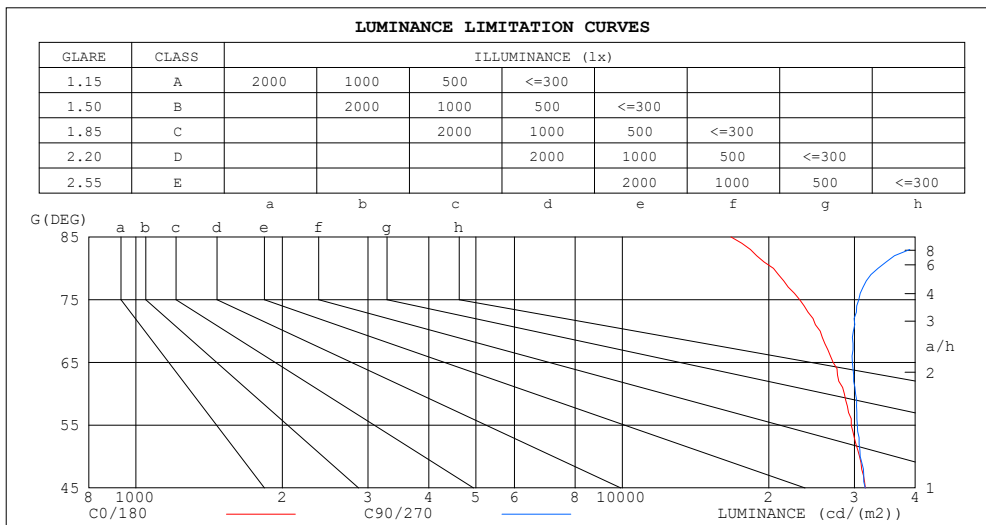
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	35.36	35.30	35.04	35.19					0- 10	3.400	3.400	3.24,3.24
20	33.10	32.66	32.36	32.69					10- 20	9.623	13.02	12.4,12.4
30	29.49	29.11	28.47	28.96					20- 30	14.27	27.29	26,26
40	24.91	24.63	23.84	24.55					30- 40	16.77	44.06	42,42
50	19.76	19.81	18.69	19.71					40- 50	17.01	61.07	58.2,58.2
60	14.30	15.08	13.31	14.93					50- 60	15.16	76.23	72.7,72.7
70	8.725	10.21	7.741	10.08					60- 70	11.63	87.85	83.8,83.8
80	3.552	5.822	2.693	5.619					70- 80	7.095	94.95	90.5,90.5
90	0.2726	3.263	0.1102	3.129					80- 90	3.027	97.98	93.4,93.4
100	0.0123	3.128	0.0494	2.858					90-100	1.702	99.68	95,95.1
110	0.0123	2.907	0.0739	2.808					100-110	1.568	101.2	96.5,96.5
120	0.0123	2.722	0.0862	2.303					110-120	1.349	102.6	97.8,97.8
130	0.0123	2.438	0.0985	2.180					120-130	1.109	103.7	98.9,98.9
140	0.0491	2.069	0.1251	0.4206					130-140	0.7631	104.5	99.6,99.6
150	0.0738	0.4667	0.1600	0.1573					140-150	0.2852	104.8	99.9,99.9
160	0.1355	0.1879	0.1765	0.1530					150-160	0.0786	104.8	99.9,100
170	0.1530	0.1808	0.1788	0.1487					160-170	0.0461	104.9	100,100
180	0.1724	0.1601	0.1724	0.1478					170-180	0.0160	104.9	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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-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	16728	47593
80	20454	33530
75	23151	30632
70	25511	29842
65	27121	29717
60	28609	30165
55	29557	30420
50	30744	30823
45	31588	31572

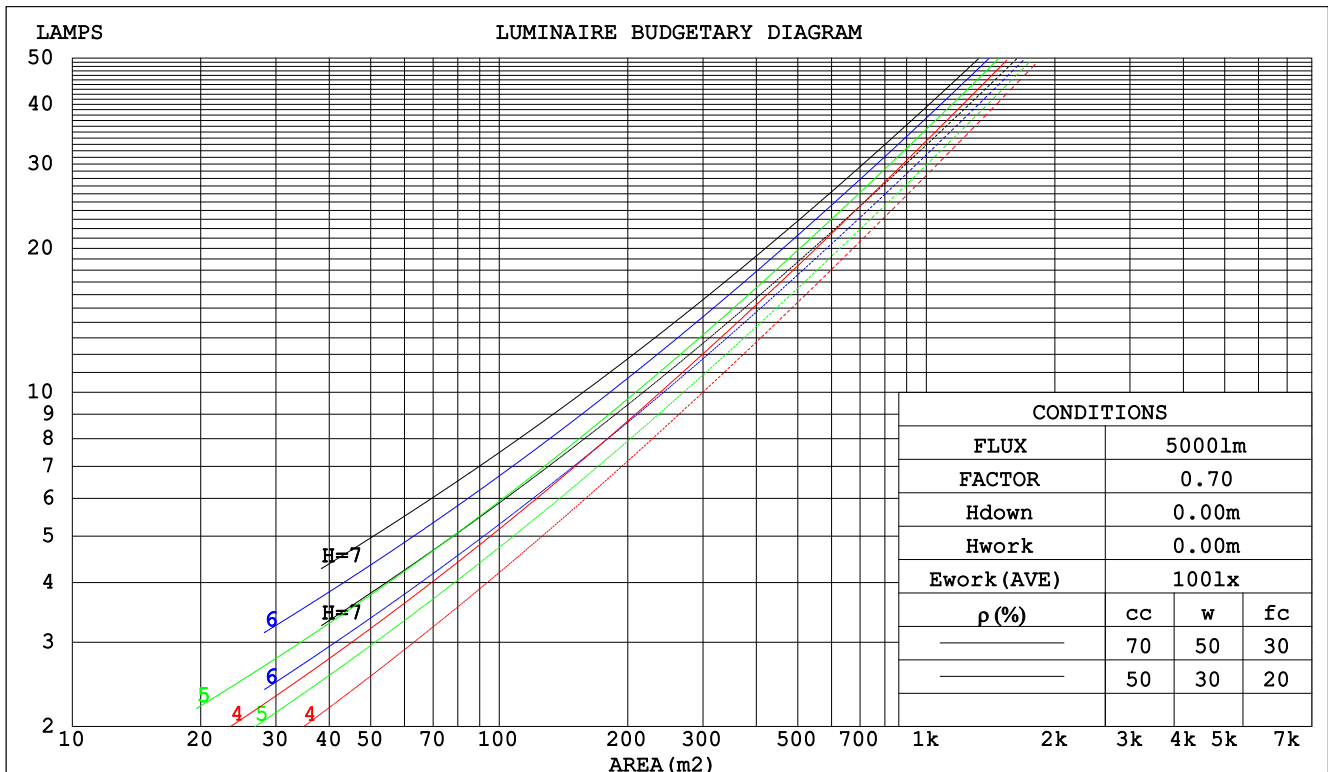
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-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															



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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz		
Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-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	.317	.180	.057	.308	.176	.056	.291	.167	.053	.275	.159	.051	.261	.151	.049		
2.0	.293	.160	.049	.285	.157	.048	.269	.150	.047	.255	.143	.045	.242	.137	.043		
3.0	.269	.143	.043	.262	.140	.042	.248	.134	.041	.235	.129	.040	.224	.124	.038		
4.0	.247	.128	.038	.241	.126	.037	.228	.121	.036	.217	.117	.035	.207	.112	.034		
5.0	.228	.116	.034	.222	.114	.033	.211	.110	.032	.201	.106	.032	.192	.102	.031		
6.0	.211	.106	.030	.206	.104	.030	.196	.101	.029	.187	.097	.029	.178	.094	.028		
7.0	.196	.097	.028	.192	.096	.027	.183	.092	.027	.174	.089	.026	.167	.087	.025		
8.0	.183	.090	.025	.179	.088	.025	.171	.085	.024	.163	.083	.024	.156	.080	.023		
9.0	.172	.083	.023	.168	.082	.023	.161	.079	.022	.154	.077	.022	.147	.075	.022		
10.0	.161	.077	.021	.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	.241	.241	.241	.206	.206	.206	.140	.140	.140	.081	.081	.081	.026	.026	.026	
1.0	.232	.207	.185	.198	.177	.159	.135	.122	.110	.078	.071	.064	.025	.023	.021	
2.0	.223	.183	.149	.191	.157	.129	.131	.109	.090	.076	.063	.053	.024	.021	.017	
3.0	.216	.166	.126	.185	.143	.109	.127	.099	.076	.073	.058	.045	.024	.019	.015	
4.0	.208	.152	.110	.178	.132	.096	.123	.092	.067	.071	.054	.040	.023	.018	.013	
5.0	.200	.142	.099	.172	.123	.086	.119	.086	.061	.069	.050	.036	.022	.016	.012	
6.0	.193	.134	.091	.166	.116	.080	.115	.081	.056	.066	.048	.033	.021	.016	.011	
7.0	.186	.127	.086	.160	.110	.075	.111	.077	.053	.064	.046	.031	.021	.015	.010	
8.0	.180	.121	.081	.155	.105	.071	.107	.074	.050	.062	.044	.030	.020	.014	.010	
9.0	.174	.117	.078	.150	.101	.068	.104	.071	.048	.061	.042	.029	.020	.014	.010	
10.0	.168	.112	.075	.145	.097	.065	.101	.069	.046	.059	.041	.028	.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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz										
Lamp Flux:104.865x1 lm										
NAME: RIBDC-4-40K-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	32.0	33.5	32.4	33.8	34.1	32.2	33.6	32.5	33.9	34.3
3H	33.5	34.8	33.9	35.1	35.5	33.9	35.2	34.3	35.5	35.9
4H	34.0	35.3	34.5	35.7	36.0	34.6	35.9	35.0	36.3	36.6
6H	34.4	35.6	34.9	36.0	36.4	35.4	36.5	35.8	36.9	37.3
8H	34.6	35.7	35.0	36.1	36.5	35.7	36.8	36.1	37.2	37.7
12H	34.6	35.7	35.1	36.1	36.6	36.1	37.2	36.5	37.6	38.0
4H 2H	32.6	33.9	33.1	34.3	34.6	32.8	34.0	33.2	34.4	34.8
3H	34.3	35.4	34.7	35.8	36.2	34.6	35.7	35.1	36.1	36.6
4H	35.0	36.0	35.5	36.4	36.9	35.5	36.5	36.0	37.0	37.4
6H	35.5	36.4	36.0	36.9	37.4	36.4	37.3	36.9	37.8	38.3
8H	35.7	36.5	36.2	37.0	37.5	36.8	37.7	37.4	38.1	38.7
12H	35.8	36.6	36.3	37.1	37.6	37.3	38.1	37.8	38.6	39.1
8H 4H	35.3	36.1	35.8	36.6	37.1	35.8	36.6	36.3	37.1	37.6
6H	36.0	36.7	36.6	37.2	37.8	36.9	37.5	37.4	38.1	38.6
8H	36.3	36.9	36.9	37.4	38.0	37.4	38.0	38.0	38.6	39.2
12H	36.5	37.0	37.1	37.6	38.2	38.1	38.6	38.6	39.1	39.8
12H 4H	35.4	36.1	35.9	36.6	37.2	35.8	36.6	36.3	37.1	37.6
6H	36.1	36.7	36.7	37.3	37.9	36.9	37.5	37.5	38.1	38.7
8H	36.5	37.0	37.1	37.6	38.2	37.5	38.1	38.1	38.6	39.2
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, 104.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -7.8)
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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

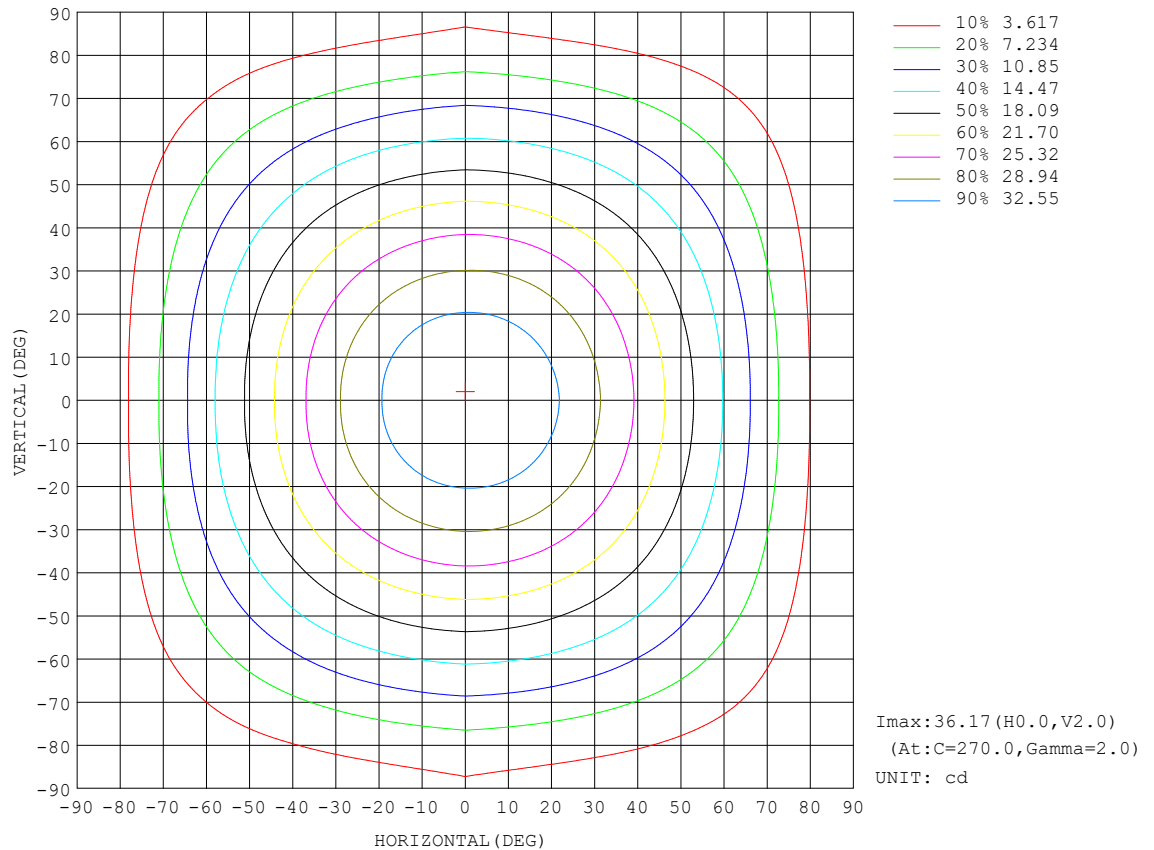
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	53	43	37	30
0.80	66	54	46	64	53	46	62	52	46	39
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	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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

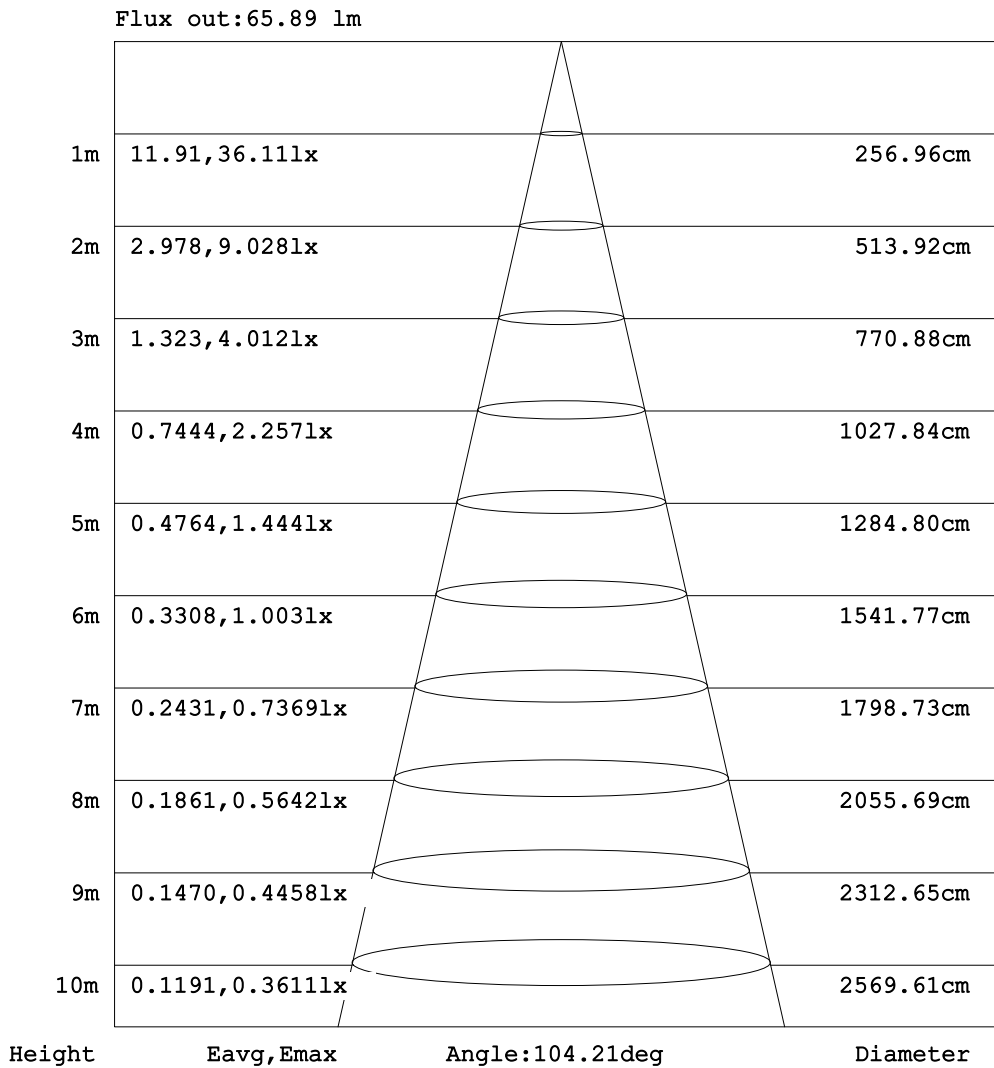


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:



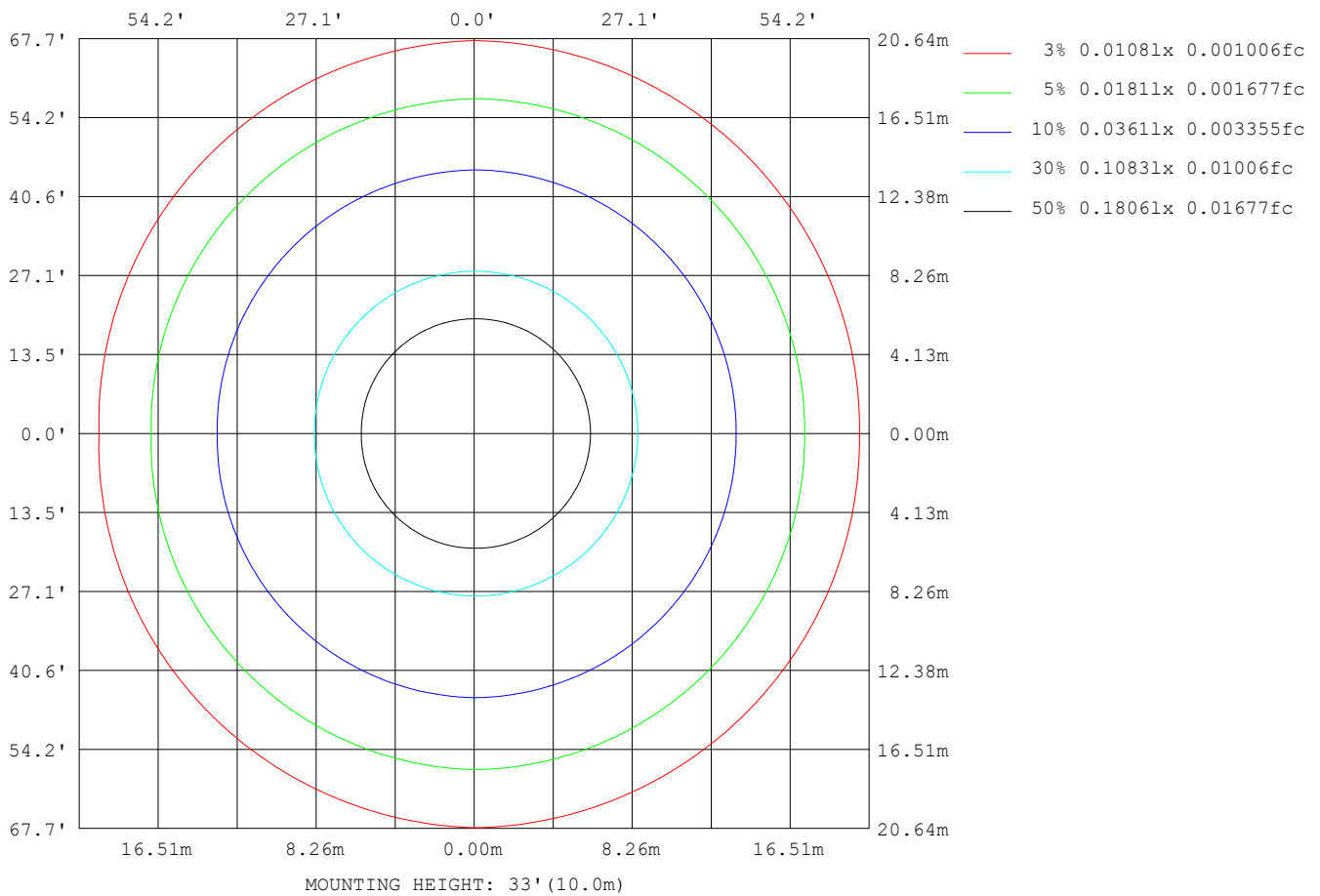
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

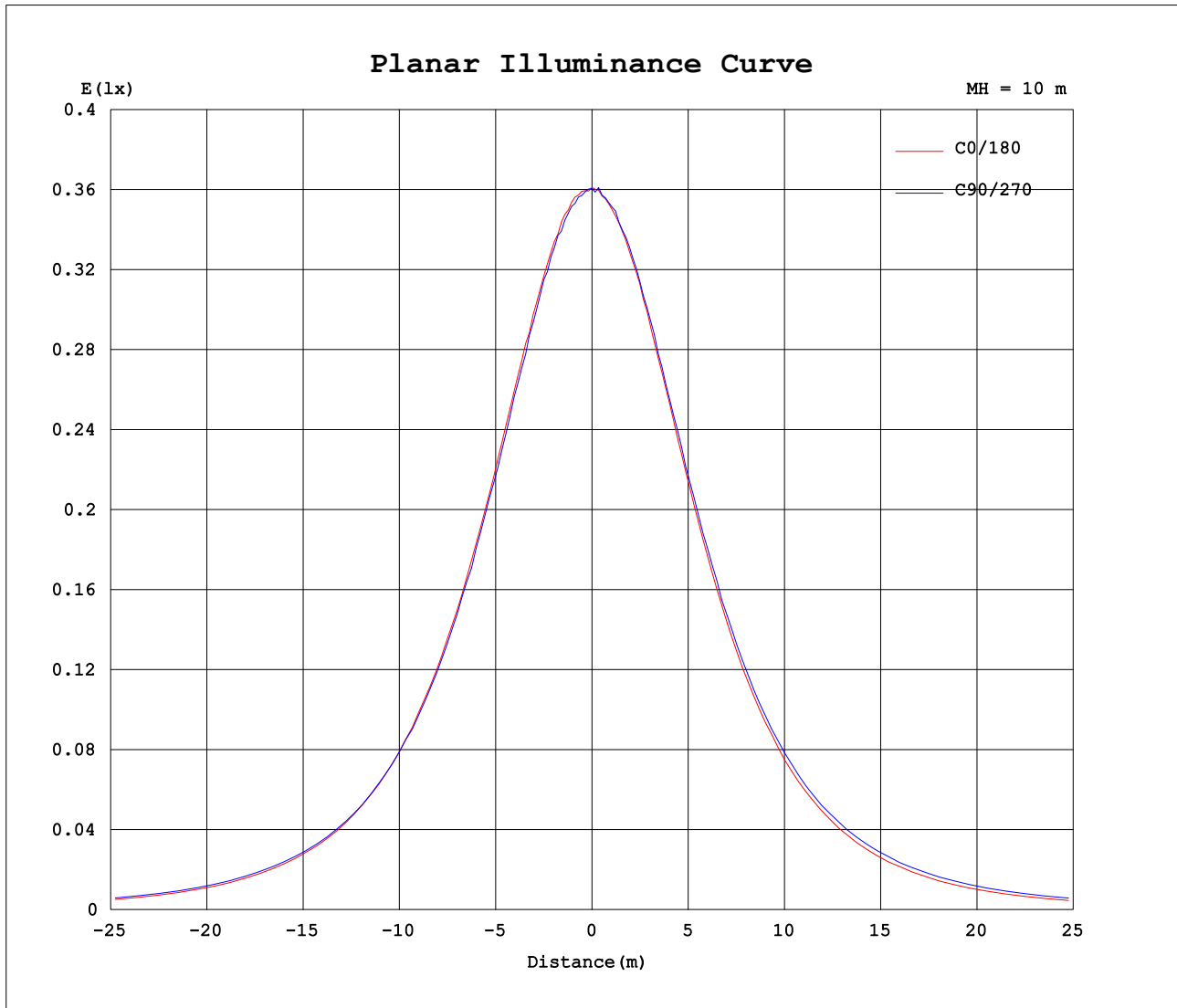
AvgL	cd/m2
L_0~180 (65) av	26040
L_0~180 (75) av	21416
L_0~180 (85) av	13648
L_90~270 (65) av	29595
L_90~270 (75) av	30242
L_90~270 (85) av	46562
L_45 (65) av	28194
L_45 (75) av	26824
L_45 (85) av	34027

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:24.002V I:0.0548A P:1.3153W PF:1.0000 Freq:0Hz Lamp Flux:104.865x1 lm		
NAME: RIBDC-4-40K-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	36.1	36.1	36.1	36.1															
5	36.0	35.7	35.7	35.8															
10	35.4	35.3	35.0	35.2															
15	34.5	34.1	33.8	34.0															
20	33.1	32.7	32.4	32.7															
25	31.4	30.9	30.6	31.0															
30	29.5	29.1	28.5	29.0															
35	27.2	26.9	26.2	26.9															
40	24.9	24.6	23.8	24.6															
45	22.3	22.3	21.2	22.2															
50	19.8	19.8	18.7	19.7															
55	17.0	17.4	16.0	17.3															
60	14.3	15.1	13.3	14.9															
65	11.5	12.6	10.5	12.5															
70	8.73	10.2	7.74	10.1															
75	5.99	7.93	5.09	7.73															
80	3.55	5.82	2.69	5.62															
85	1.46	4.15	0.92	3.97															
90	0.27	3.26	0.11	3.13															
95	0.01	3.16	0.05	2.93															
100	0.01	3.13	0.05	2.86															
105	0.01	2.98	0.06	2.85															
110	0.01	2.91	0.07	2.81															
115	0.01	2.84	0.07	2.46															
120	0.01	2.72	0.09	2.30															
125	0.01	2.59	0.10	2.25															
130	0.01	2.44	0.10	2.18															
135	0.02	2.28	0.11	1.66															
140	0.05	2.07	0.13	0.42															
145	0.06	1.51	0.15	0.16															
150	0.07	0.47	0.16	0.16															
155	0.12	0.22	0.17	0.16															
160	0.14	0.19	0.18	0.15															
165	0.14	0.18	0.18	0.15															
170	0.15	0.18	0.18	0.15															
175	0.16	0.18	0.18	0.15															
180	0.17	0.16	0.17	0.15															

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
γ Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks: