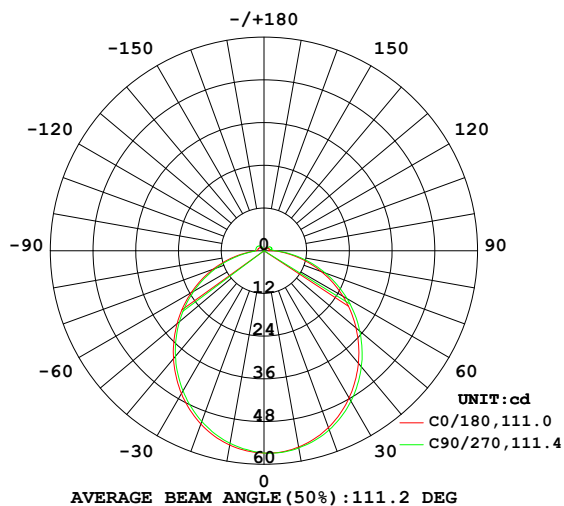


LUMINAIRE PHOTOMETRIC TEST REPORT

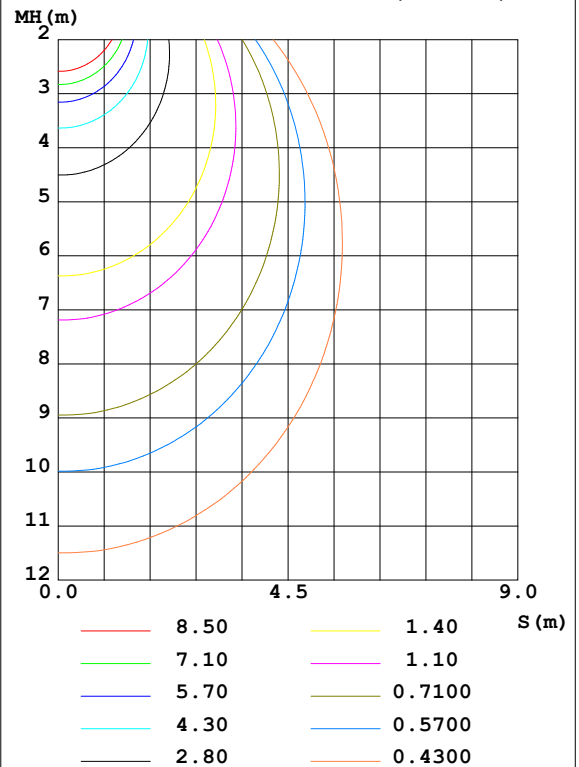
Test:U:24.001V I:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 76.94 lm/W			
MODEL	L Type	I _{max} (cd)	56.90	S/MH(C0/180)	1.22
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)		TOTAL FLUX(lm)	173.77	η UP,DN(C0-180)	2.6,49.5
NOMINAL FLUX(lm)	173.77	CIE CLASS	DIRECT	η UP,DN(C180-360)	3.1,44.8
LAMPS INSIDE	1	η up(%)	5.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		η down(%)	94.3	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:

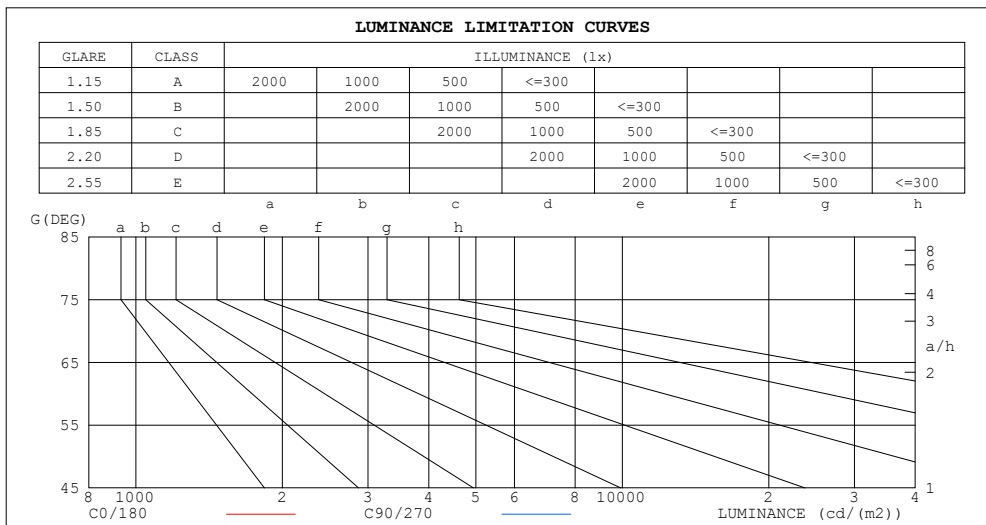
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	55.99	56.25	55.44	54.92					0- 10	5.368	5.368	3.09,3.09
20	52.87	53.54	51.82	51.04					10- 20	15.30	20.67	11.9,11.9
30	47.78	48.83	46.35	45.47					20- 30	23.00	43.67	25.1,25.1
40	41.28	42.53	39.53	38.73					30- 40	27.50	71.16	41,41
50	33.74	35.14	31.89	31.02					40- 50	28.41	99.58	57.3,57.3
60	25.65	26.94	23.67	22.80					50- 60	25.85	125.4	72.2,72.2
70	17.17	18.33	15.26	14.35					60- 70	20.32	145.7	83.9,83.9
80	8.913	9.809	7.209	6.324					70- 80	12.77	158.5	91.2,91.2
90	2.763	3.187	2.350	2.390					80- 90	5.360	163.9	94.3,94.3
100	1.530	1.873	1.786	2.355					90-100	2.257	166.1	95.6,95.6
110	1.573	2.328	1.736	2.337					100-110	2.072	168.2	96.8,96.8
120	1.556	2.118	1.567	2.266					110-120	1.930	170.1	97.9,97.9
130	1.317	1.488	1.379	2.094					120-130	1.526	171.7	98.8,98.8
140	1.404	0.3220	1.157	1.798					130-140	1.025	172.7	99.4,99.4
150	0.7887	0.3209	0.9360	1.454					140-150	0.6511	173.3	99.7,99.7
160	0.5174	0.3135	0.6154	0.2830					150-160	0.3070	173.6	99.9,99.9
170	0.3327	0.2716	0.3709	0.2759					160-170	0.1084	173.7	100,100
180	0.2833	0.2340	0.2833	0.2710					170-180	0.0276	173.8	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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-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	61416	68882
80	51327	56489
75	50052	54178
70	50188	53597
65	50731	53665
60	51302	53881
55	51873	54250
50	52496	54673
45	53153	55084

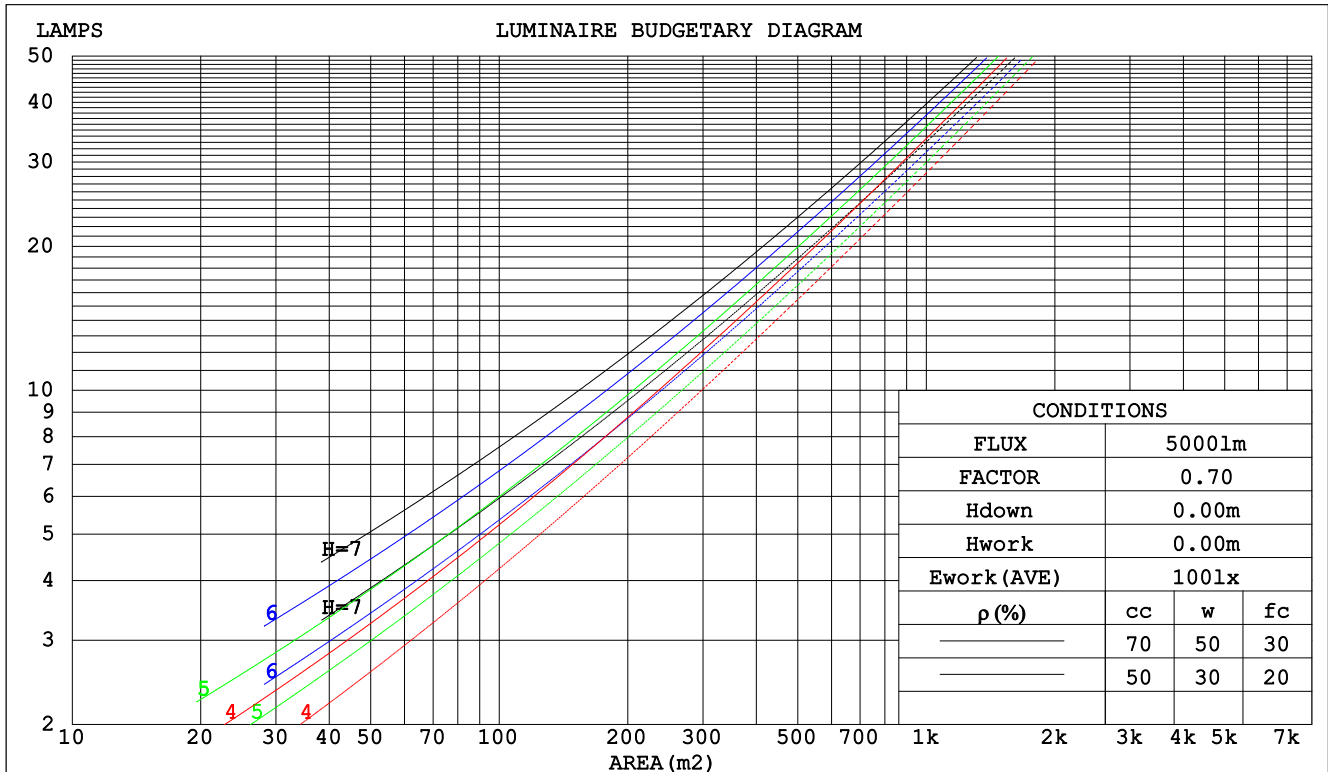
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-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	.88	.81	.75	.86	.80	.74	.81	.76	.71	.77	.73	.69	.74	.70	.67	.64
3.0	.77	.69	.62	.75	.68	.62	.72	.65	.60	.68	.63	.58	.65	.60	.56	.54
4.0	.68	.60	.53	.67	.58	.52	.64	.56	.51	.61	.54	.49	.58	.53	.48	.46
5.0	.61	.52	.45	.60	.51	.45	.57	.49	.44	.54	.48	.43	.52	.46	.42	.40
6.0	.55	.46	.40	.54	.45	.39	.51	.44	.38	.49	.43	.38	.47	.41	.37	.35
7.0	.50	.41	.35	.49	.40	.35	.47	.39	.34	.45	.38	.33	.43	.37	.33	.31
8.0	.45	.37	.31	.44	.36	.31	.43	.35	.30	.41	.34	.30	.39	.34	.29	.27
9.0	.42	.33	.28	.41	.33	.28	.39	.32	.27	.38	.31	.27	.36	.31	.26	.24
10.0	.38	.31	.25	.38	.30	.25	.36	.29	.25	.35	.29	.24	.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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz		
Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-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	.324	.184	.058	.315	.180	.057	.299	.171	.055	.283	.163	.052	.269	.156	.050	
2.0	.298	.164	.050	.291	.160	.049	.276	.153	.048	.262	.147	.046	.250	.141	.045	
3.0	.273	.146	.044	.266	.143	.043	.253	.137	.042	.241	.132	.041	.230	.127	.039	
4.0	.251	.130	.038	.245	.128	.038	.233	.124	.037	.222	.119	.036	.212	.115	.035	
5.0	.231	.118	.034	.226	.116	.034	.215	.112	.033	.205	.108	.032	.196	.105	.031	
6.0	.214	.107	.031	.209	.105	.030	.199	.102	.030	.190	.099	.029	.182	.096	.028	
7.0	.199	.098	.028	.194	.097	.028	.186	.094	.027	.177	.091	.026	.170	.088	.026	
8.0	.185	.091	.025	.181	.089	.025	.173	.087	.025	.166	.084	.024	.159	.082	.024	
9.0	.174	.084	.023	.170	.083	.023	.163	.080	.023	.156	.078	.022	.150	.076	.022	
10.0	.163	.078	.022	.160	.077	.022	.153	.075	.021	.147	.073	.021	.141	.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	.234	.234	.234	.200	.200	.200	.136	.136	.136	.078	.078	.078	.025	.025	.025	
1.0	.225	.200	.177	.193	.171	.152	.132	.118	.105	.076	.068	.061	.024	.022	.020	
2.0	.217	.176	.141	.186	.151	.122	.127	.105	.085	.074	.061	.050	.024	.020	.016	
3.0	.209	.159	.118	.180	.137	.102	.123	.095	.072	.071	.056	.042	.023	.018	.014	
4.0	.202	.146	.103	.173	.126	.089	.119	.088	.063	.069	.051	.037	.022	.017	.012	
5.0	.194	.135	.092	.167	.117	.080	.115	.082	.056	.067	.048	.033	.021	.016	.011	
6.0	.187	.127	.084	.161	.110	.073	.111	.077	.052	.064	.045	.031	.021	.015	.010	
7.0	.180	.120	.078	.155	.104	.068	.107	.073	.048	.062	.043	.029	.020	.014	.009	
8.0	.174	.114	.074	.150	.099	.064	.104	.070	.046	.060	.041	.027	.019	.013	.009	
9.0	.168	.110	.070	.144	.095	.061	.100	.067	.044	.058	.039	.026	.019	.013	.009	
10.0	.162	.105	.068	.140	.091	.059	.097	.064	.042	.057	.038	.025	.018	.013	.008	

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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz										
Lamp Flux:173.77x1 lm										
NAME: RIBDC-RL-30K-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	32.5	33.9	32.8	34.2	34.6	32.7	34.1	33.0	34.4	34.7
3H	34.2	35.5	34.5	35.8	36.2	34.4	35.8	34.8	36.1	36.4
4H	34.9	36.2	35.3	36.5	36.9	35.2	36.5	35.6	36.8	37.2
6H	35.5	36.7	36.0	37.1	37.5	35.9	37.1	36.3	37.5	37.9
8H	35.8	37.0	36.2	37.4	37.8	36.2	37.3	36.6	37.7	38.1
12H	36.1	37.2	36.5	37.6	38.0	36.5	37.6	36.9	38.0	38.4
4H 2H	33.1	34.4	33.5	34.8	35.2	33.3	34.6	33.7	34.9	35.3
3H	35.0	36.1	35.5	36.5	37.0	35.2	36.3	35.7	36.7	37.2
4H	35.9	36.9	36.4	37.4	37.8	36.2	37.2	36.6	37.6	38.1
6H	36.7	37.6	37.2	38.1	38.6	37.0	37.9	37.5	38.4	38.9
8H	37.0	37.9	37.5	38.4	38.9	37.4	38.2	37.9	38.7	39.2
12H	37.4	38.1	37.9	38.6	39.2	37.7	38.5	38.2	39.0	39.5
8H 4H	36.3	37.1	36.8	37.6	38.1	36.5	37.3	37.0	37.8	38.3
6H	37.3	38.0	37.8	38.5	39.0	37.5	38.2	38.1	38.7	39.3
8H	37.7	38.4	38.3	38.9	39.4	38.0	38.7	38.6	39.2	39.8
12H	38.2	38.7	38.7	39.3	39.9	38.5	39.1	39.1	39.6	40.2
12H 4H	36.3	37.1	36.8	37.6	38.1	36.5	37.3	37.0	37.8	38.3
6H	37.4	38.0	37.9	38.5	39.1	37.6	38.3	38.2	38.8	39.4
8H	37.9	38.4	38.5	39.0	39.6	38.2	38.7	38.8	39.3	39.9
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, 173.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -6.1)
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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

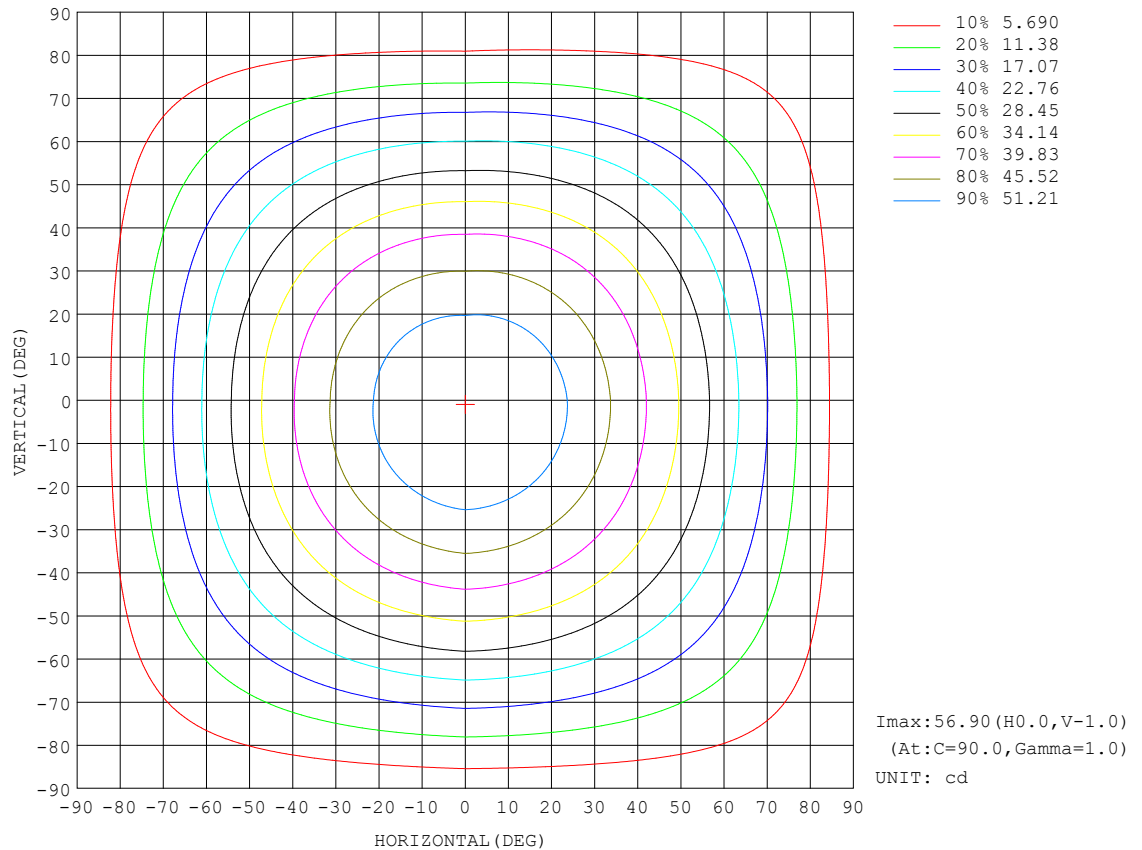
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	55	44	37	54	43	36	53	43	36	30
0.80	65	53	46	64	53	45	62	52	45	38
1.00	73	62	54	72	61	54	69	62	53	45
1.25	80	69	62	79	68	61	75	67	60	52
1.50	85	75	68	83	74	67	80	72	65	57
2.00	92	83	76	90	82	75	86	79	73	64
2.50	96	88	81	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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

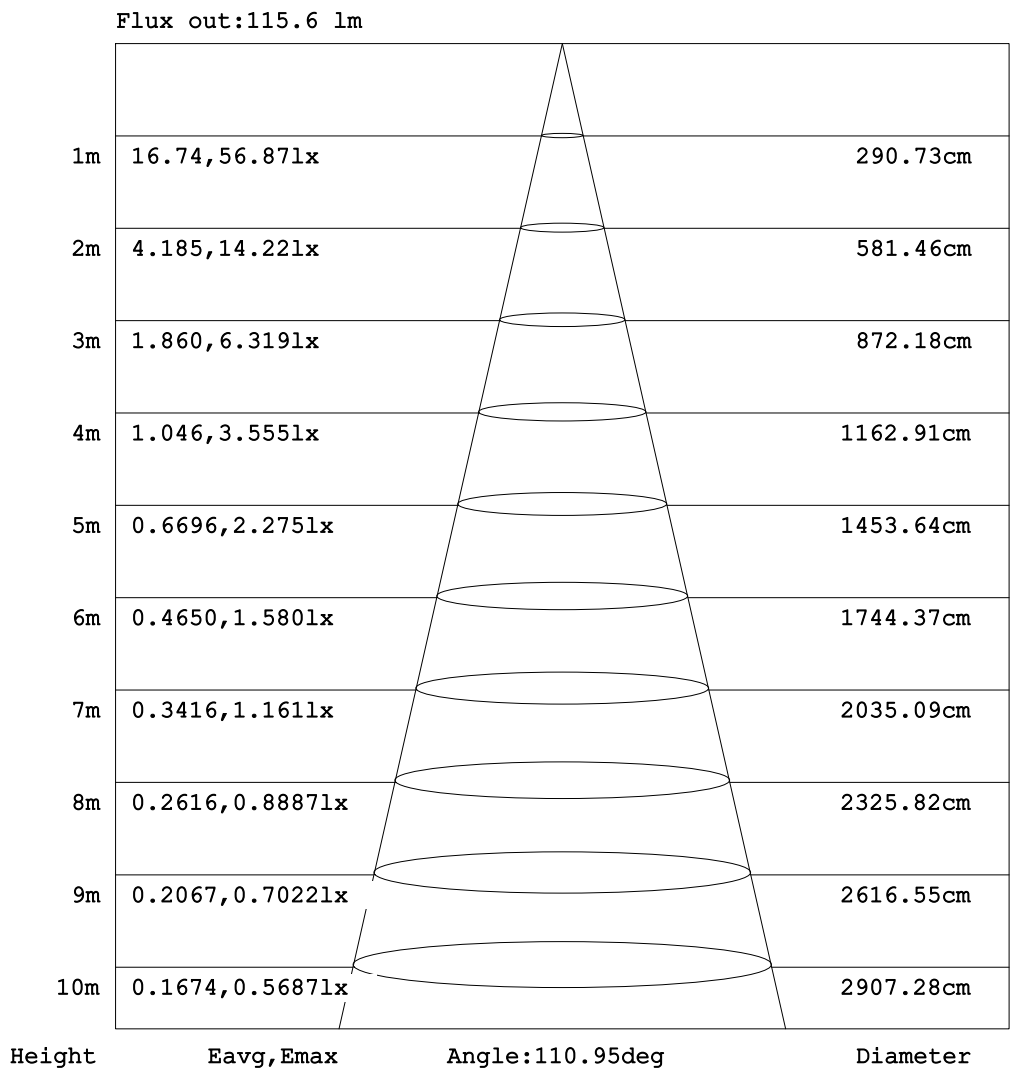


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:



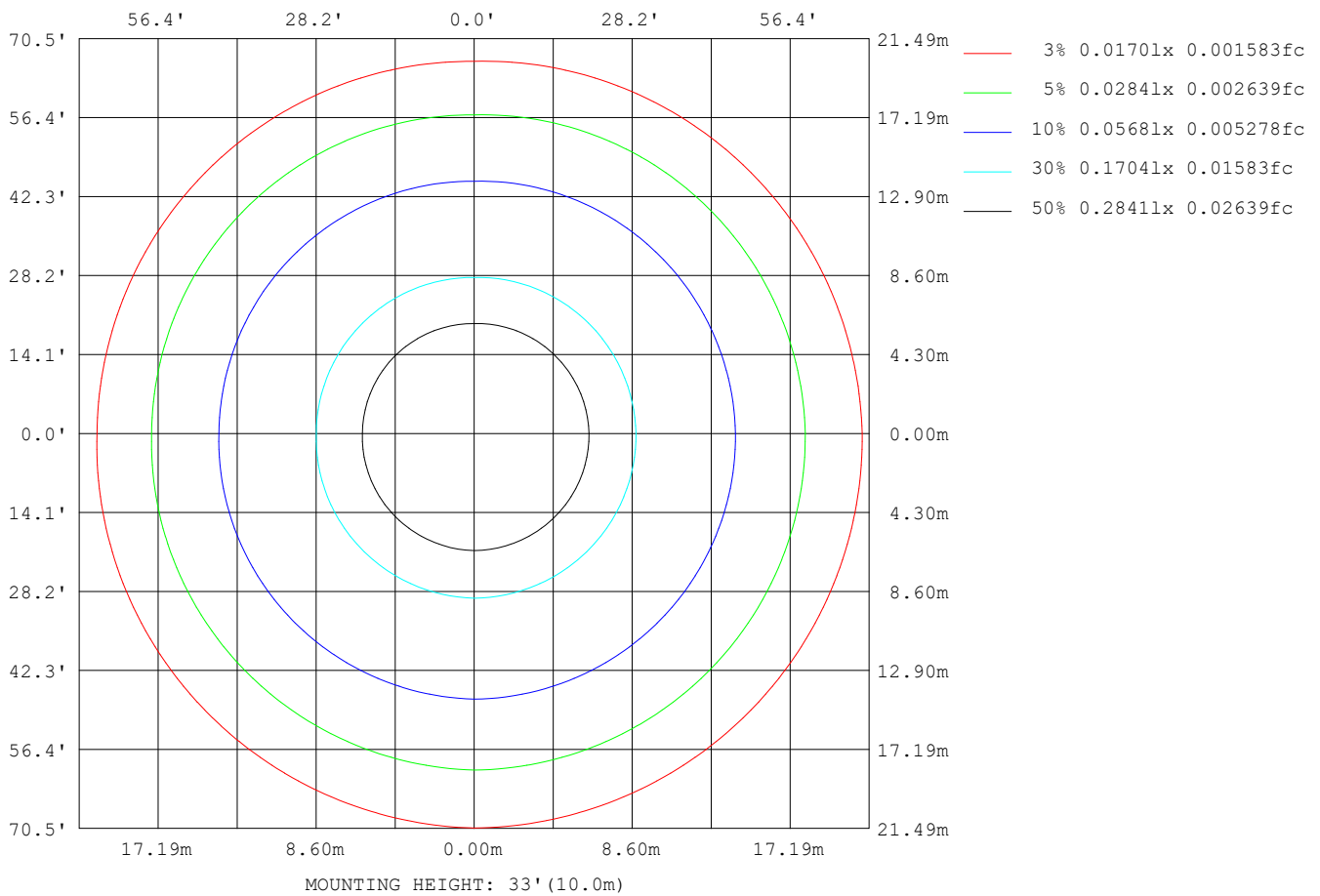
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

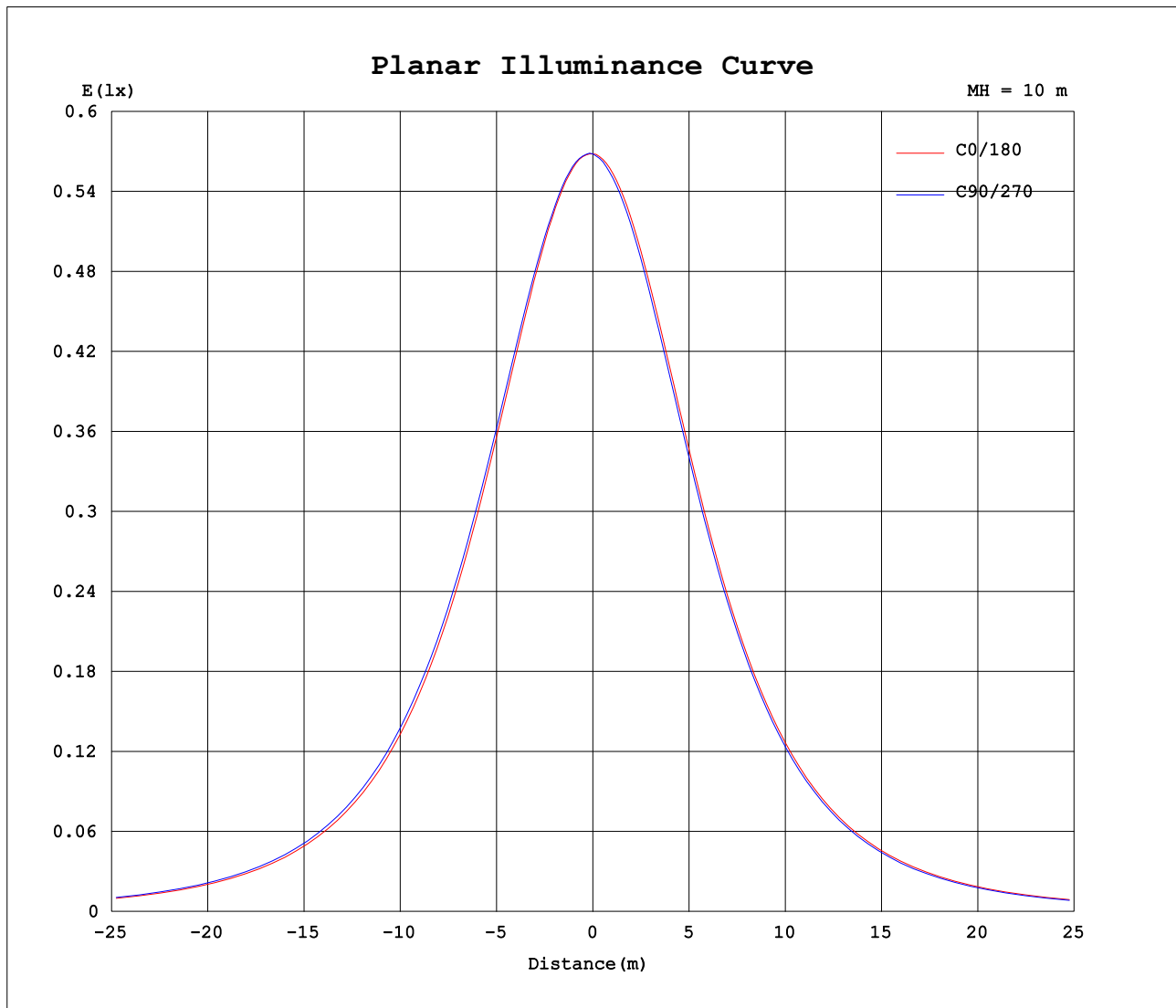
AvgL	cd/m2
L_0~180 (65) av	48363
L_0~180 (75) av	46495
L_0~180 (85) av	53641
L_90~270 (65) av	48786
L_90~270 (75) av	46709
L_90~270 (85) av	53967
L_45 (65) av	48480
L_45 (75) av	46407
L_45 (85) av	53359

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:0.0941A P:2.2585W PF:1.0000 Freq:0Hz Lamp Flux:173.77x1 lm		
NAME: RIBDC-RL-30K-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	56.8	56.8	56.8	56.8															
5	56.8	56.9	56.4	56.1															
10	56.0	56.2	55.4	54.9															
15	54.7	55.1	53.9	53.2															
20	52.9	53.5	51.8	51.0															
25	50.5	51.4	49.3	48.4															
30	47.8	48.8	46.4	45.5															
35	44.6	45.8	43.0	42.2															
40	41.3	42.5	39.5	38.7															
45	37.6	39.0	35.8	34.9															
50	33.7	35.1	31.9	31.0															
55	29.8	31.1	27.8	27.0															
60	25.7	26.9	23.7	22.8															
65	21.4	22.7	19.4	18.6															
70	17.2	18.3	15.3	14.4															
75	13.0	14.0	11.1	10.2															
80	8.91	9.81	7.21	6.32															
85	5.35	6.00	4.00	3.40															
90	2.76	3.19	2.35	2.39															
95	1.34	2.57	1.92	2.37															
100	1.53	1.87	1.79	2.36															
105	1.55	2.34	1.75	2.35															
110	1.57	2.33	1.74	2.34															
115	1.57	2.23	1.69	2.32															
120	1.56	2.12	1.57	2.27															
125	0.91	1.97	1.54	2.19															
130	1.32	1.49	1.38	2.09															
135	1.48	0.30	1.32	1.95															
140	1.40	0.32	1.16	1.80															
145	1.12	0.32	1.02	1.64															
150	0.79	0.32	0.94	1.45															
155	0.60	0.32	0.75	0.91															
160	0.52	0.31	0.62	0.28															
165	0.42	0.30	0.50	0.28															
170	0.33	0.27	0.37	0.28															
175	0.30	0.23	0.30	0.27															
180	0.28	0.23	0.28	0.27															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
γ Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
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Remarks: