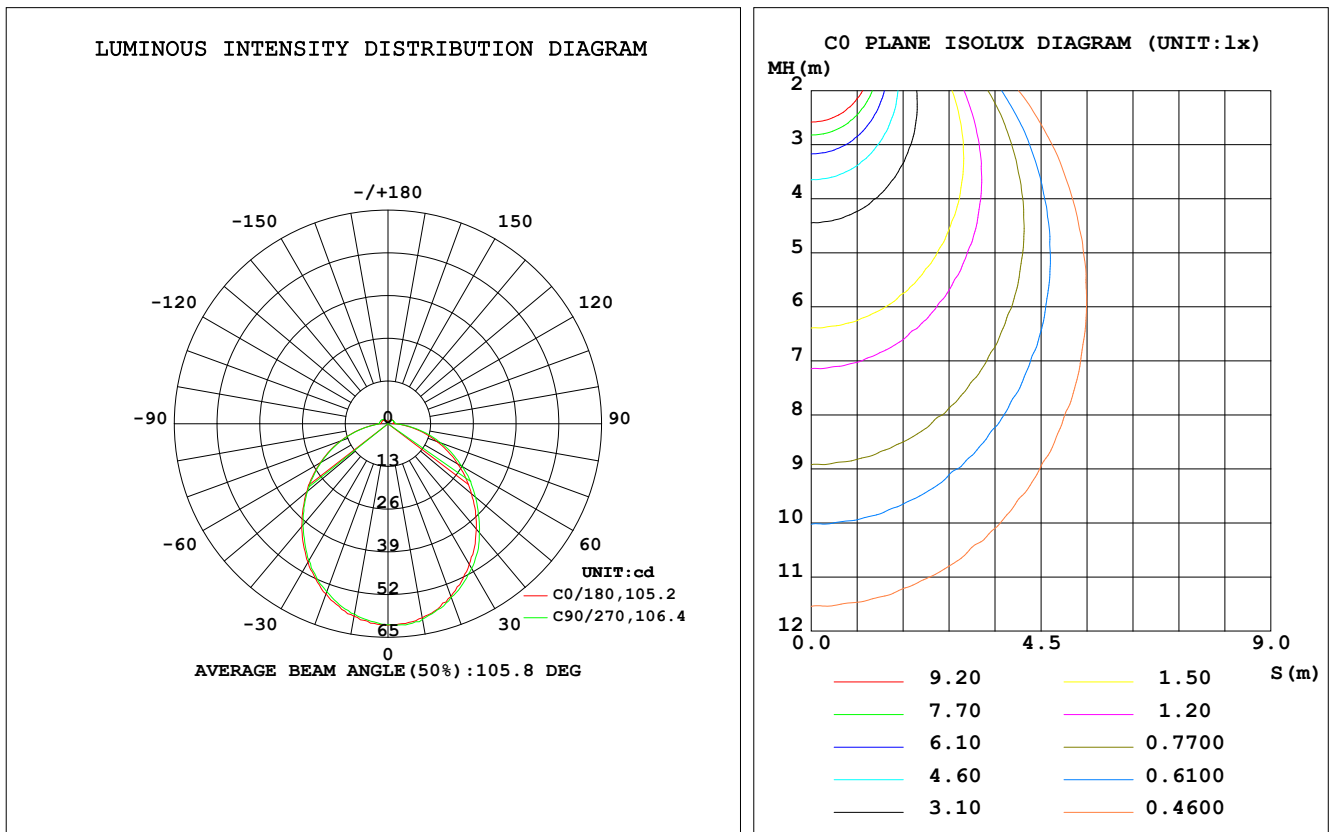


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.001V I:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 78.18 lm/W			
MODEL	L Type	I _{max} (cd)	61.47	S/MH (C0/180)	1.19
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE (V)		TOTAL FLUX (lm)	177.70	η UP,DN (C0-180)	2.9,48.2
NOMINAL FLUX (lm)	177.7	CIE CLASS	DIRECT	η UP,DN (C180-360)	3.2,45.7
LAMPS INSIDE	1	η up (%)	6.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	94.0	CIBSE SHR MAX	1.35



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:

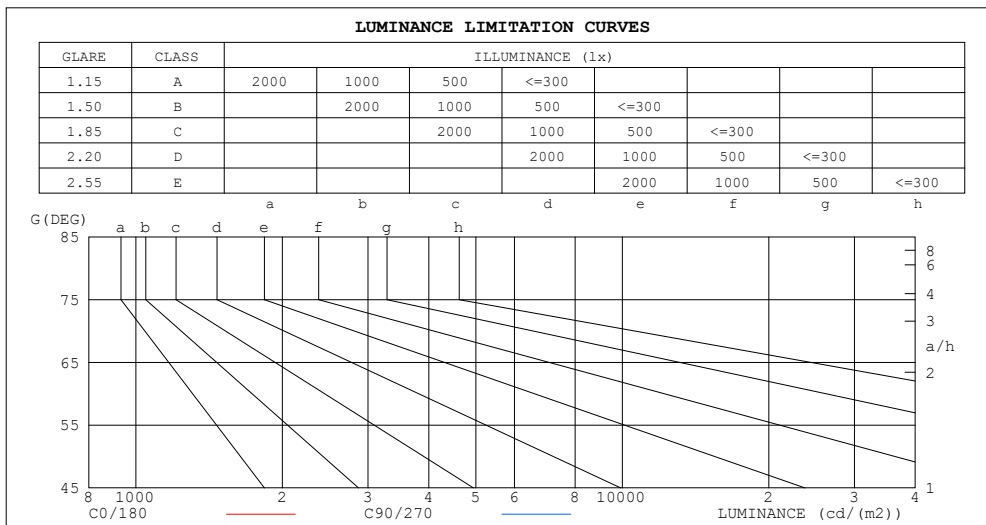
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	59.99	60.46	59.48	58.81					0- 10	5.773	5.773	3.25,3.25
20	55.99	56.17	55.12	54.45					10- 20	16.32	22.09	12.4,12.4
30	49.42	50.92	48.61	48.10					20- 30	24.23	46.32	26.1,26.1
40	41.88	43.32	40.85	40.35					30- 40	28.51	74.83	42.1,42.1
50	33.19	34.76	32.27	31.99					40- 50	28.81	103.6	58.3,58.3
60	24.57	26.02	23.85	23.54					50- 60	25.80	129.4	72.8,72.8
70	15.95	17.07	15.29	15.08					60- 70	19.97	149.4	84.1,84.1
80	7.829	8.627	7.395	7.223					70- 80	12.39	161.8	91.1,91.1
90	2.492	2.573	2.594	2.735					80- 90	5.160	167.0	94,94
100	1.761	2.147	2.040	2.587					90-100	2.390	169.4	95.3,95.3
110	1.887	1.946	1.990	2.451					100-110	2.221	171.6	96.6,96.6
120	1.876	1.912	1.897	2.303					110-120	2.025	173.6	97.7,97.7
130	1.774	1.761	1.736	2.045					120-130	1.724	175.3	98.7,98.7
140	1.614	1.391	1.539	1.148					130-140	1.316	176.6	99.4,99.4
150	1.171	0.3741	1.243	0.2442					140-150	0.6191	177.3	99.8,99.8
160	0.6533	0.3359	0.8000	0.2404					150-160	0.2937	177.6	99.9,99.9
170	0.4149	0.2977	0.3568	0.2366					160-170	0.1191	177.7	100,100
180	0.2956	0.2710	0.2956	0.2340					170-180	0.0286	177.7	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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-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	51939	57157
80	45084	49679
75	45483	49278
70	46622	49924
65	47848	51102
60	49135	52030
55	50434	53647
50	51634	54078
45	53274	55014

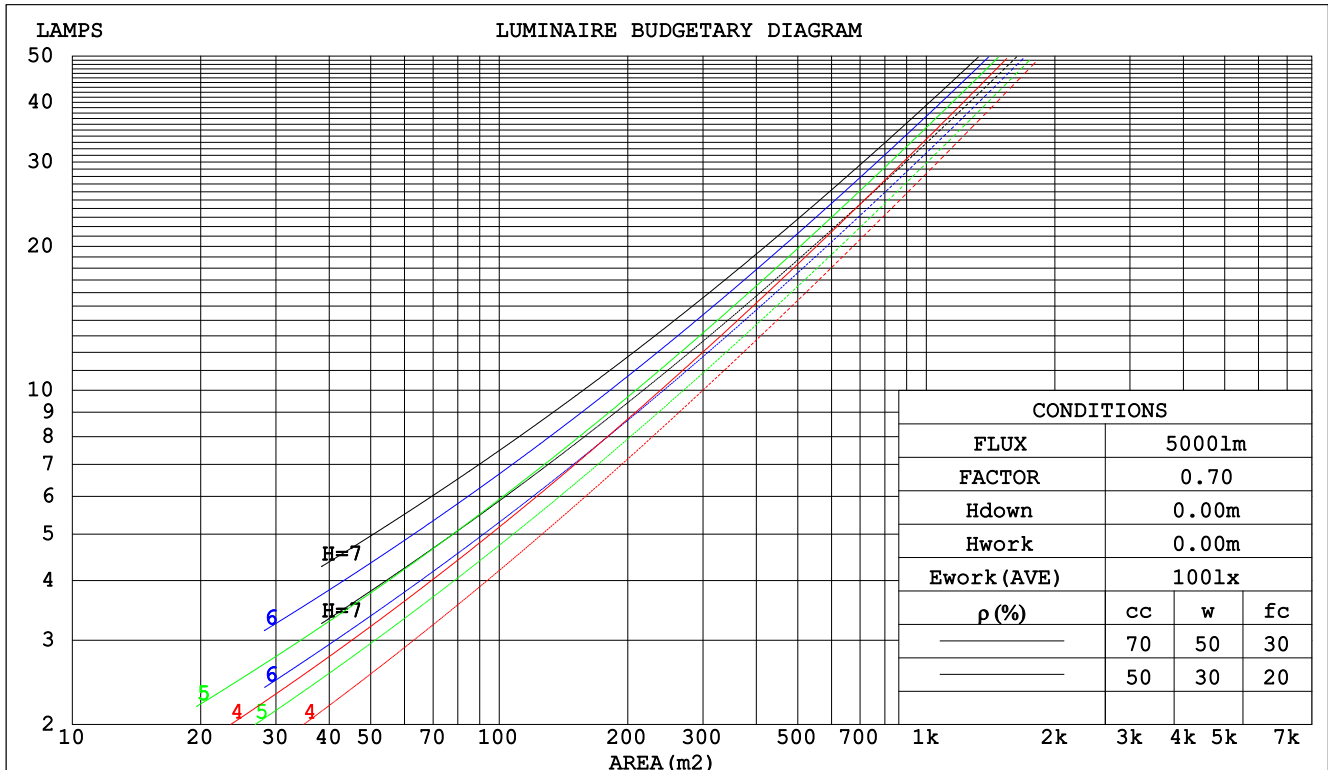
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-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	.96	.96	.96	.94
1.0	1.02	.98	.94	.99	.95	.91	.94	.90	.87	.89	.86	.84	.84	.82	.80	.78
2.0	.89	.82	.76	.86	.80	.75	.82	.77	.72	.78	.73	.69	.74	.70	.67	.65
3.0	.78	.70	.63	.76	.68	.62	.72	.66	.60	.68	.63	.59	.65	.61	.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	.45	.55	.48	.44	.52	.47	.42	.40
6.0	.56	.47	.40	.54	.46	.40	.52	.45	.39	.50	.43	.38	.48	.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	.42	.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	.36	.29	.25	.34	.29	.25	.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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz		
Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-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	.318	.181	.057	.309	.176	.056	.293	.168	.054	.277	.160	.051	.263	.152	.049		
2.0	.294	.161	.049	.286	.157	.049	.271	.151	.047	.257	.144	.045	.245	.138	.044		
3.0	.270	.144	.043	.263	.141	.042	.249	.135	.041	.237	.130	.040	.226	.125	.039		
4.0	.248	.129	.038	.242	.126	.037	.230	.122	.036	.219	.117	.035	.208	.113	.034		
5.0	.229	.116	.034	.223	.114	.033	.212	.110	.033	.202	.107	.032	.193	.103	.031		
6.0	.212	.106	.030	.207	.104	.030	.197	.101	.029	.188	.098	.029	.179	.094	.028		
7.0	.197	.097	.028	.192	.096	.027	.183	.093	.027	.175	.090	.026	.168	.087	.026		
8.0	.184	.090	.025	.180	.088	.025	.172	.086	.024	.164	.083	.024	.157	.081	.024		
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	.146	.072	.021	.140	.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	.237	.237	.237	.202	.202	.202	.138	.138	.138	.079	.079	.079	.025	.025	.025	
1.0	.227	.202	.180	.194	.174	.155	.133	.120	.107	.077	.069	.062	.025	.022	.020	
2.0	.219	.179	.144	.188	.154	.125	.129	.106	.087	.074	.062	.051	.024	.020	.017	
3.0	.211	.161	.121	.181	.139	.105	.124	.097	.074	.072	.056	.043	.023	.018	.014	
4.0	.204	.148	.106	.175	.128	.092	.120	.089	.065	.070	.052	.038	.022	.017	.013	
5.0	.196	.138	.095	.169	.119	.082	.116	.083	.058	.067	.049	.035	.022	.016	.011	
6.0	.189	.130	.087	.163	.112	.076	.112	.079	.054	.065	.046	.032	.021	.015	.011	
7.0	.182	.123	.081	.157	.106	.071	.108	.075	.050	.063	.044	.030	.020	.014	.010	
8.0	.176	.117	.077	.151	.102	.067	.105	.071	.047	.061	.042	.028	.020	.014	.009	
9.0	.170	.112	.073	.146	.097	.064	.101	.068	.045	.059	.040	.027	.019	.013	.009	
10.0	.164	.108	.070	.142	.094	.062	.098	.066	.044	.057	.039	.026	.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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz										
Lamp Flux:177.7x1 lm										
NAME: RIBDC-LL-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	32.1	33.6	32.5	33.9	34.2	32.4	33.8	32.7	34.1	34.4
3H	33.7	35.0	34.1	35.4	35.7	34.0	35.3	34.4	35.6	36.0
4H	34.4	35.6	34.8	36.0	36.4	34.7	36.0	35.1	36.3	36.7
6H	34.9	36.1	35.4	36.5	36.9	35.3	36.5	35.7	36.9	37.3
8H	35.2	36.3	35.6	36.7	37.1	35.5	36.7	36.0	37.1	37.5
12H	35.4	36.5	35.8	36.9	37.3	35.8	36.9	36.2	37.3	37.7
4H 2H	32.8	34.0	33.2	34.4	34.8	32.9	34.2	33.3	34.5	34.9
3H	34.5	35.6	35.0	36.0	36.5	34.8	35.9	35.2	36.3	36.7
4H	35.4	36.4	35.8	36.8	37.2	35.6	36.6	36.1	37.1	37.5
6H	36.0	36.9	36.5	37.4	37.9	36.4	37.3	36.9	37.7	38.2
8H	36.3	37.2	36.8	37.6	38.2	36.7	37.5	37.2	38.0	38.5
12H	36.6	37.4	37.1	37.9	38.4	37.0	37.7	37.5	38.2	38.8
8H 4H	35.7	36.5	36.2	37.0	37.5	35.9	36.7	36.4	37.2	37.7
6H	36.6	37.2	37.1	37.8	38.3	36.8	37.5	37.4	38.0	38.6
8H	37.0	37.6	37.5	38.1	38.7	37.3	37.9	37.8	38.4	39.0
12H	37.3	37.9	37.9	38.4	39.0	37.7	38.2	38.2	38.8	39.4
12H 4H	35.7	36.5	36.2	37.0	37.5	35.9	36.7	36.4	37.2	37.7
6H	36.6	37.3	37.2	37.8	38.4	36.9	37.5	37.5	38.1	38.6
8H	37.1	37.6	37.7	38.2	38.8	37.4	37.9	38.0	38.5	39.1
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 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, 177.7 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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

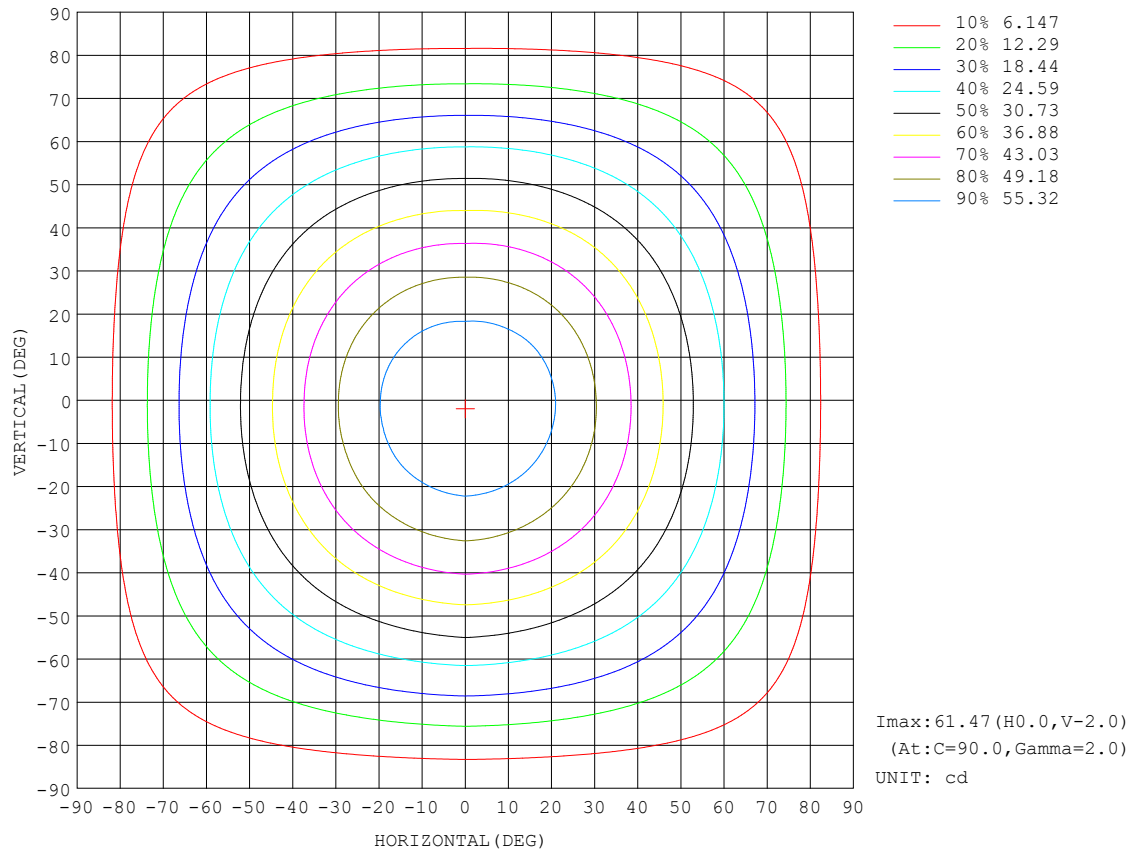
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	31
0.80	66	54	47	64	53	46	62	52	46	39
1.00	74	63	55	72	62	55	70	63	54	46
1.25	81	70	63	79	69	62	76	67	61	53
1.50	86	76	68	84	74	68	80	72	66	58
2.00	93	84	77	90	82	76	86	79	74	65
2.50	97	88	82	94	87	81	89	83	78	69
3.00	100	93	87	97	91	85	92	87	82	73
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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

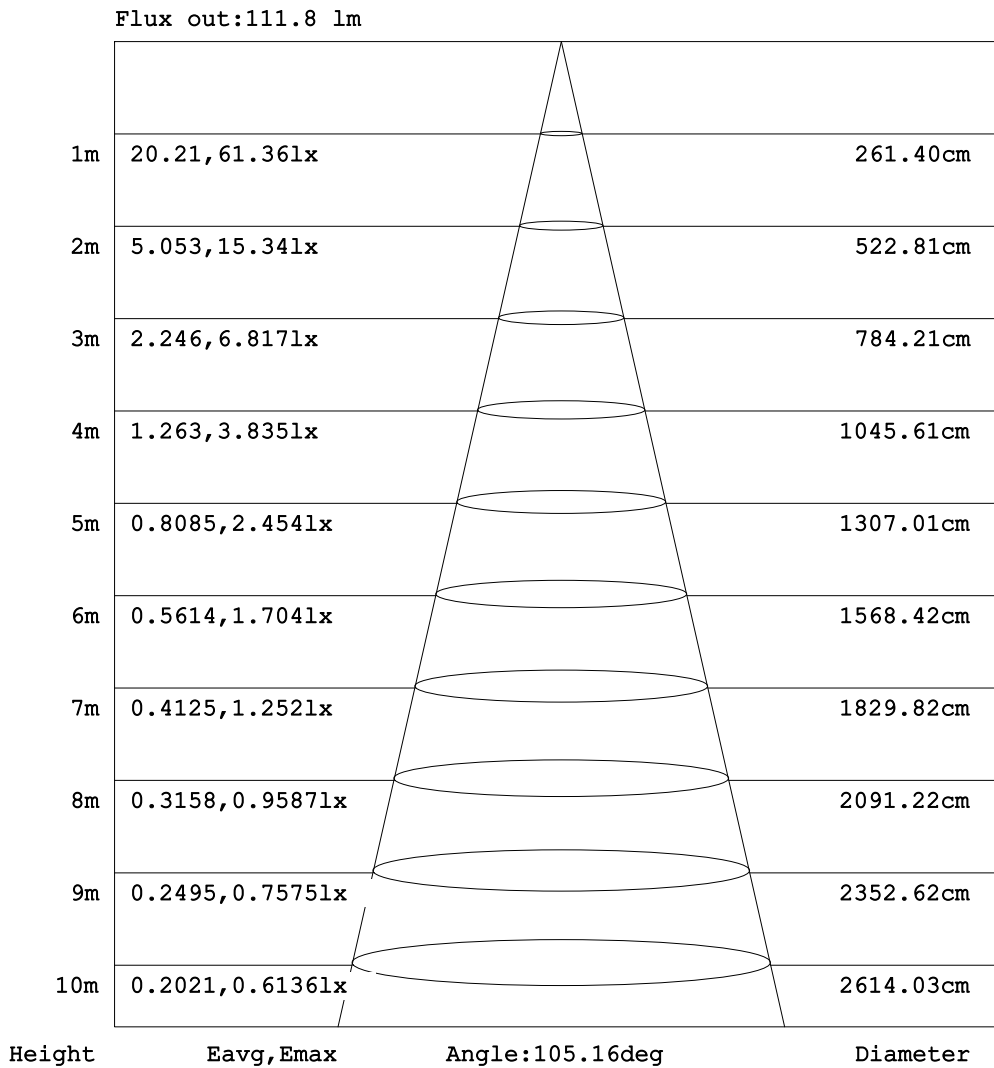


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JZ
Test Date:2023-08-08

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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:



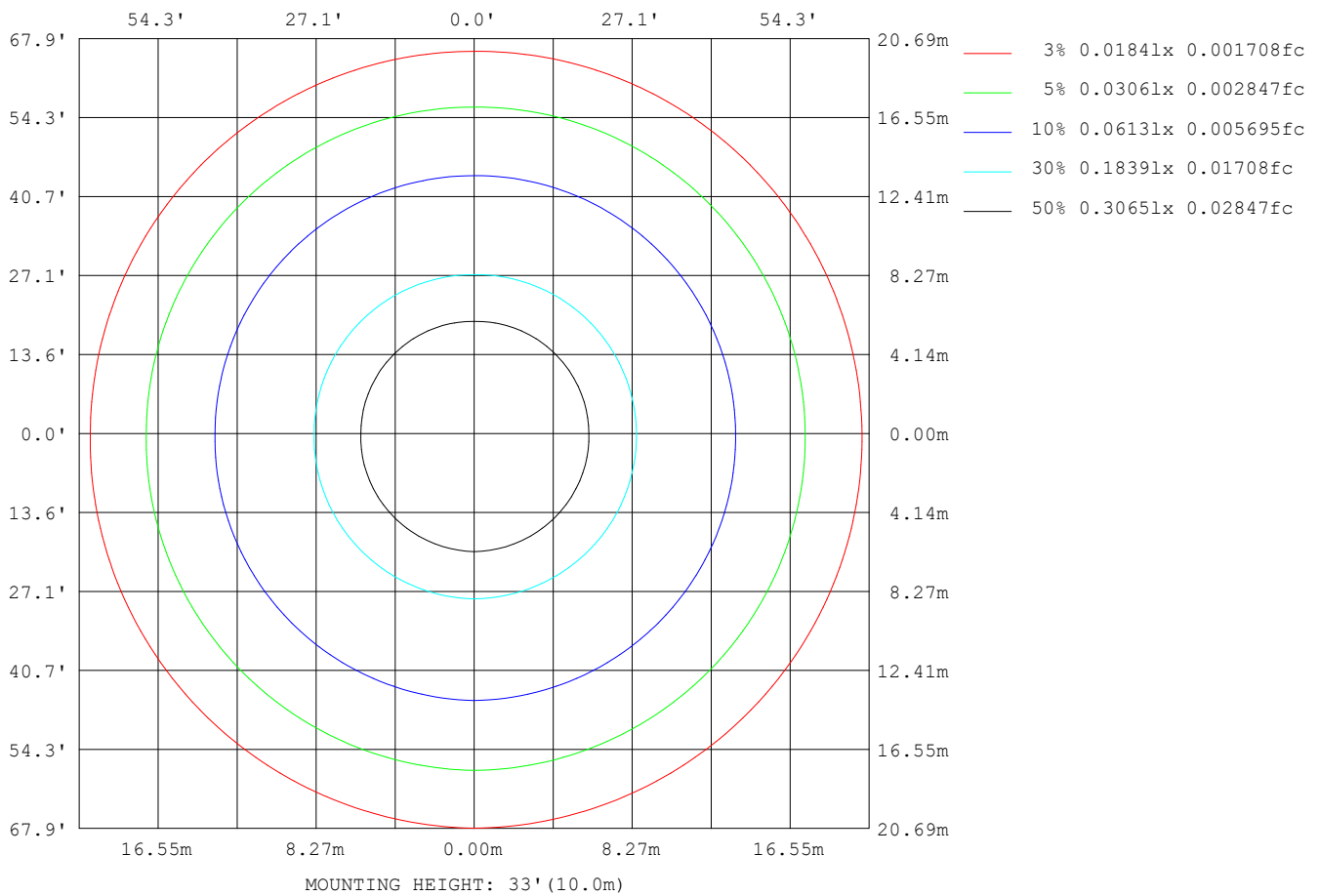
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-30K-AM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAYHIL	SUR.: 0.01*0.1	Shielding Angle:

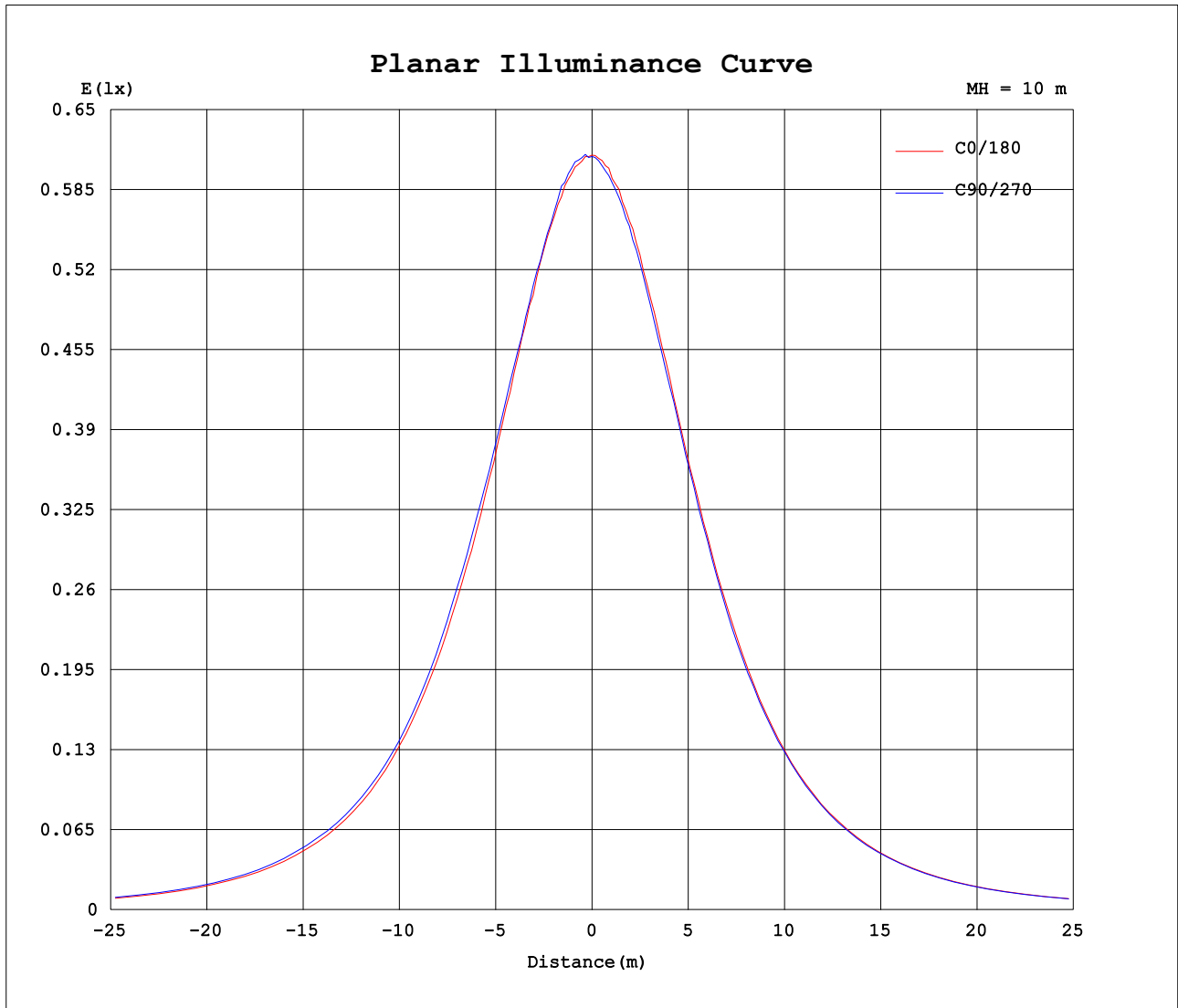
AvgL	cd/m2
L_0~180 (65) av	47068
L_0~180 (75) av	44426
L_0~180 (85) av	50529
L_90~270 (65) av	48393
L_90~270 (75) av	45853
L_90~270 (85) av	52349
L_45 (65) av	47847
L_45 (75) av	45252
L_45 (85) av	51578

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:0.0947A P:2.2729W PF:1.0000 Freq:0Hz Lamp Flux:177.7x1 lm		
NAME: RIBDC-LL-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	61.3	61.2	61.3	61.2														
5	61.0	61.5	60.9	60.3														
10	60.0	60.5	59.5	58.8														
15	58.4	58.5	57.6	57.0														
20	56.0	56.2	55.1	54.5														
25	52.9	53.8	52.1	51.6														
30	49.4	50.9	48.6	48.1														
35	45.9	47.6	44.9	44.2														
40	41.9	43.3	40.9	40.4														
45	37.7	38.9	36.6	36.3														
50	33.2	34.8	32.3	32.0														
55	28.9	30.8	28.1	27.7														
60	24.6	26.0	23.8	23.5														
65	20.2	21.6	19.6	19.3														
70	15.9	17.1	15.3	15.1														
75	11.8	12.8	11.2	11.0														
80	7.83	8.63	7.39	7.22														
85	4.53	4.98	4.28	4.14														
90	2.49	2.57	2.59	2.74														
95	1.51	2.22	2.12	2.66														
100	1.76	2.15	2.04	2.59														
105	1.86	2.03	2.01	2.48														
110	1.89	1.95	1.99	2.45														
115	1.89	1.93	1.97	2.38														
120	1.88	1.91	1.90	2.30														
125	1.84	1.80	1.83	2.19														
130	1.77	1.76	1.74	2.04														
135	1.70	1.66	1.66	1.88														
140	1.61	1.39	1.54	1.15														
145	1.47	0.39	1.40	0.25														
150	1.17	0.37	1.24	0.24														
155	0.84	0.36	1.06	0.24														
160	0.65	0.34	0.80	0.24														
165	0.52	0.32	0.52	0.24														
170	0.41	0.30	0.36	0.24														
175	0.33	0.28	0.30	0.23														
180	0.30	0.27	0.30	0.23														

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