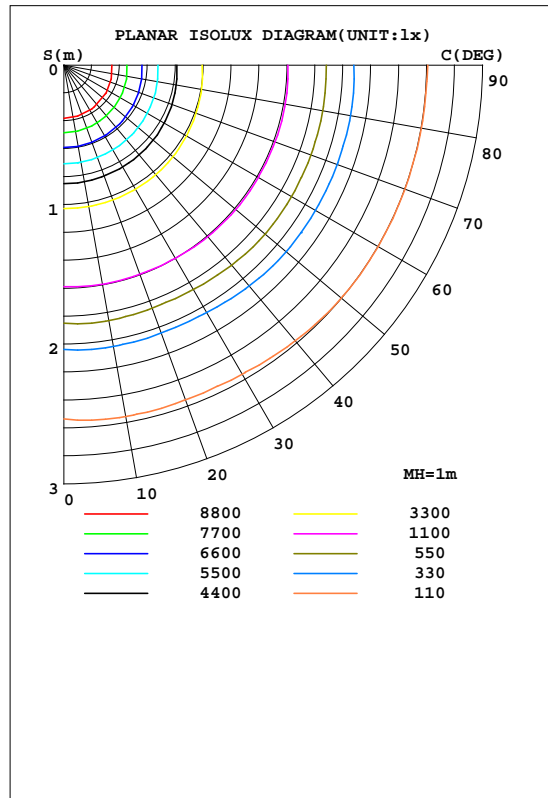
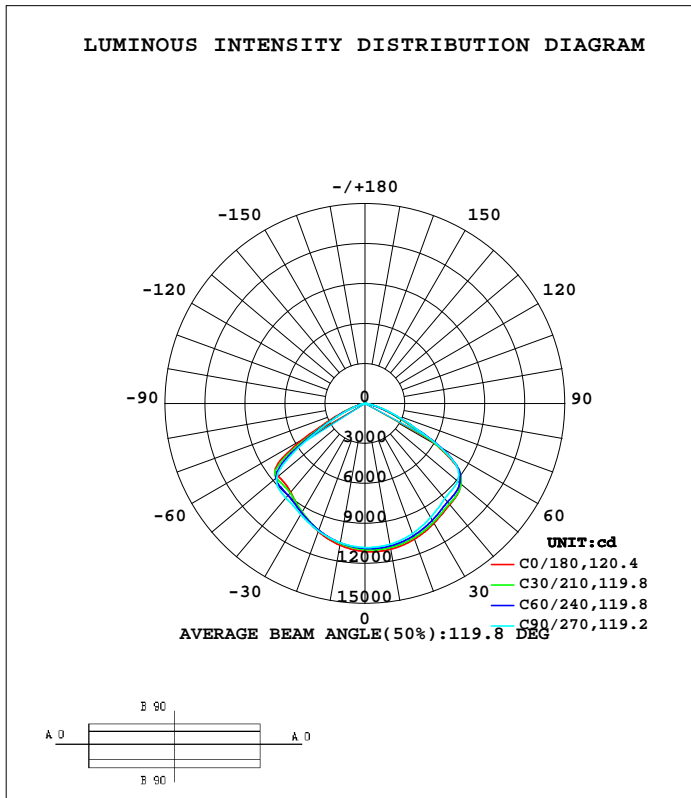


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 161.00 lm/W			
MODEL		I _{max} (cd)	11142	S/MH(C0/180)	1.28
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	1.34
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	32405	h UP, DN(C0-180)	0.0,52.8
NOMINAL FLUX(lm)	32405.1	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.0,47.2
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220	h down(%)	100.0	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

q Range: 0 - 90DEG
 q Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

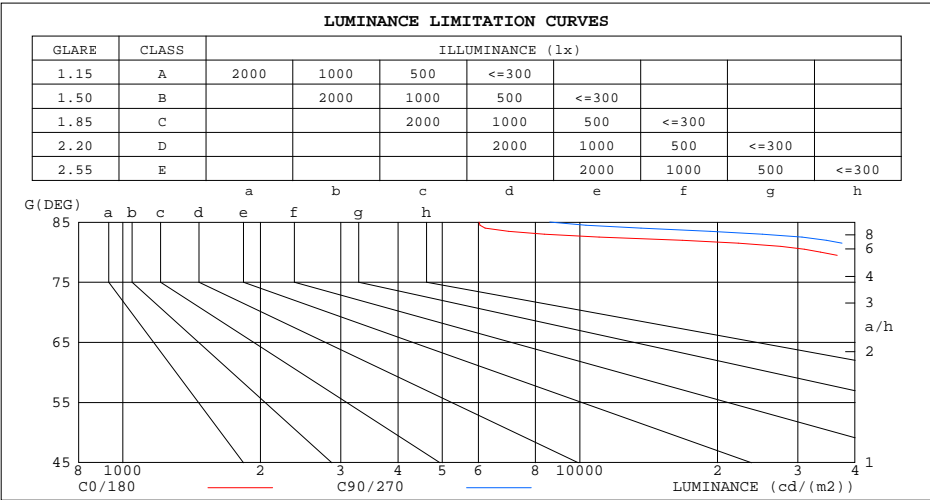
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	1111	1093	1074	1057	1081	1064	1061	1064	0- 10	1029	1029	3.18,3.18
20	1083	1067	1040	1014	1024	1011	1019	1029	10- 20	2982	4011	12.4,12.4
30	1037	1023	986.9	948.0	946.8	943.6	963.3	980.6	20- 30	4643	8654	26.7,26.7
40	990.9	977.9	932.4	877.1	869.4	887.0	925.4	944.1	30- 40	5943	14597	45,45
50	940.4	939.4	907.4	851.3	848.9	873.6	863.5	883.2	40- 50	7024	21621	66.7,66.7
60	604.1	651.0	641.5	689.2	536.8	443.9	402.9	423.8	50- 60	6811	28433	87.7,87.7
70	179.3	204.0	212.8	200.2	137.3	110.5	105.8	105.8	60- 70	3135	31568	97.4,97.4
80	24.52	32.17	35.41	31.11	9.504	3.525	2.742	3.513	70- 80	784.8	32353	99.8,99.8
90	1.344	1.493	1.433	1.406	1.287	1.381	1.428	1.386	80- 90	52.33	32405	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:×10cd Less than 35% Percent = 22.3 %									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6018	8598
80	33626	48555
75	73122	93141
70	124785	148119
65	189762	209084
60	287689	305453
55	354158	352583
50	348323	336128
45	328288	310041

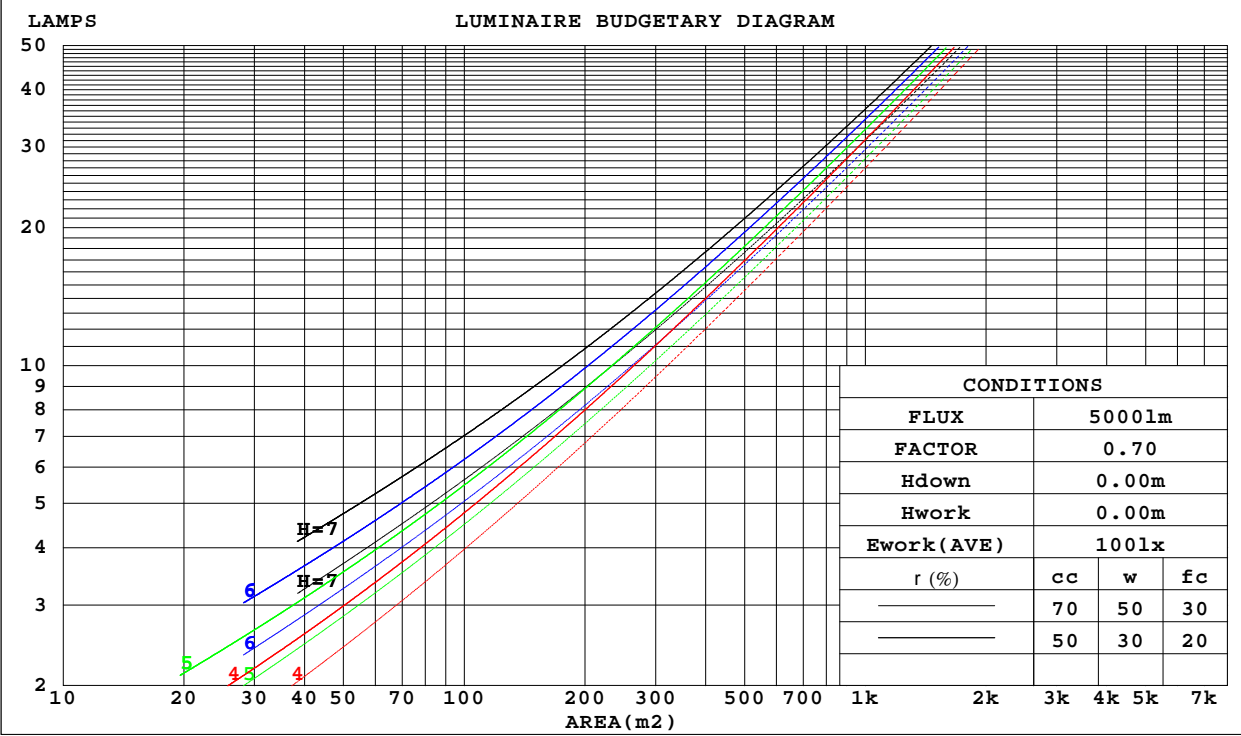
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.06	1.02	.99	1.04	1.00	.97	.90	.97	.94	.96	.93	.91	.92	.90	.89	.87
2.0	.93	.87	.82	.91	.86	.81	.88	.83	.79	.85	.81	.77	.82	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.68	.78	.71	.66	.75	.70	.65	.72	.68	.64	.62
4.0	.73	.64	.58	.71	.63	.57	.69	.62	.57	.67	.61	.56	.64	.59	.55	.53
5.0	.65	.56	.49	.64	.55	.49	.61	.54	.49	.60	.53	.48	.58	.52	.48	.46
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.54	.47	.42	.52	.46	.42	.40
7.0	.52	.44	.38	.52	.43	.37	.50	.43	.37	.49	.42	.37	.47	.41	.37	.35
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.43	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.40	.34	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.38	.31	.26	.37	.31	.26	.25



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

r cc	80%			70%			50%			30%			10%			0
r w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.270	.153	.049	.263	.150	.048	.250	.143	.046	.238	.137	.044	.227	.131	.042	
2.0	.266	.146	.045	.259	.143	.044	.248	.138	.043	.237	.133	.042	.228	.129	.041	
3.0	.253	.135	.040	.247	.132	.040	.237	.129	.039	.228	.125	.038	.219	.121	.038	
4.0	.238	.124	.036	.233	.122	.036	.224	.119	.035	.216	.116	.035	.208	.113	.034	
5.0	.223	.114	.033	.219	.112	.033	.211	.110	.032	.203	.107	.032	.196	.105	.031	
6.0	.209	.105	.030	.205	.104	.030	.198	.101	.029	.191	.099	.029	.185	.097	.029	
7.0	.196	.097	.027	.192	.096	.027	.186	.094	.027	.180	.092	.027	.174	.090	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.081	.023	.160	.080	.023	.155	.079	.023	
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

r cc	80%			70%			50%			30%			10%			0
r w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.138	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.099	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm										
NAME: RK-HBL200W-02-G20-120D					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: EVERFINE					SUR.:			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	21.6	23.1	21.8	23.3	23.5	21.7	23.2	22.0	23.4	23.6
3H	22.0	23.3	22.3	23.6	23.8	22.2	23.6	22.5	23.8	24.0
4H	22.0	23.3	22.3	23.5	23.8	22.3	23.6	22.6	23.8	24.1
6H	21.9	23.1	22.3	23.4	23.7	22.2	23.4	22.6	23.7	24.0
8H	21.9	23.0	22.2	23.3	23.6	22.2	23.4	22.5	23.6	23.9
12H	21.8	22.9	22.2	23.2	23.5	22.1	23.3	22.5	23.6	23.9
4H 2H	21.9	23.2	22.2	23.5	23.7	22.0	23.3	22.4	23.6	23.8
3H	22.4	23.5	22.8	23.8	24.1	22.6	23.7	23.0	24.0	24.3
4H	22.5	23.5	22.9	23.8	24.1	22.7	23.7	23.1	24.1	24.4
6H	22.4	23.3	22.8	23.7	24.0	22.7	23.6	23.1	24.0	24.3
8H	22.4	23.2	22.8	23.6	24.0	22.7	23.5	23.1	23.9	24.3
12H	22.4	23.1	22.8	23.5	23.9	22.7	23.4	23.1	23.8	24.2
8H 4H	22.5	23.3	22.9	23.6	24.0	22.7	23.5	23.1	23.9	24.3
6H	22.4	23.1	22.9	23.5	23.9	22.7	23.4	23.2	23.8	24.2
8H	22.4	23.0	22.9	23.4	23.9	22.7	23.3	23.2	23.7	24.2
12H	22.4	22.9	22.9	23.3	23.8	22.7	23.2	23.1	23.6	24.1
12H 4H	22.4	23.2	22.8	23.5	23.9	22.7	23.4	23.1	23.8	24.2
6H	22.4	23.0	22.9	23.4	23.9	22.7	23.3	23.2	23.7	24.2
8H	22.4	22.9	22.9	23.3	23.8	22.7	23.2	23.2	23.6	24.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.2				
1.5H	+ 1.0 / - 1.3					+ 1.0 / - 1.3				
2.0H	+ 0.8 / - 1.7					+ 0.8 / - 1.2				

CIE Pub.117, 32405 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 12.1)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

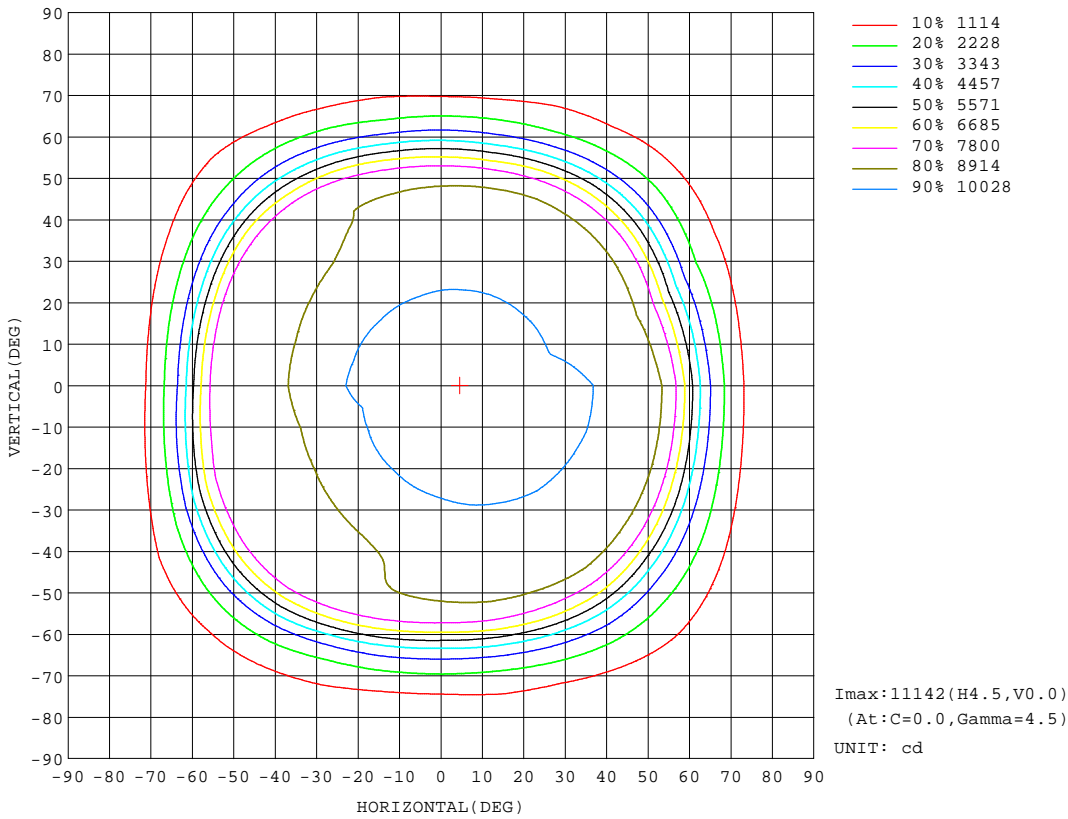
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	45	37	56	44	37	54	44	37	31
0.80	68	56	49	67	56	49	65	55	48	41
1.00	77	67	60	76	66	59	74	67	59	52
1.25	85	75	68	84	74	68	81	73	67	60
1.50	90	81	74	89	80	74	86	78	73	66
2.00	97	90	84	96	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	86	78
3.00	104	98	93	102	96	92	98	94	90	82
4.00	108	103	98	105	101	97	101	98	94	86
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



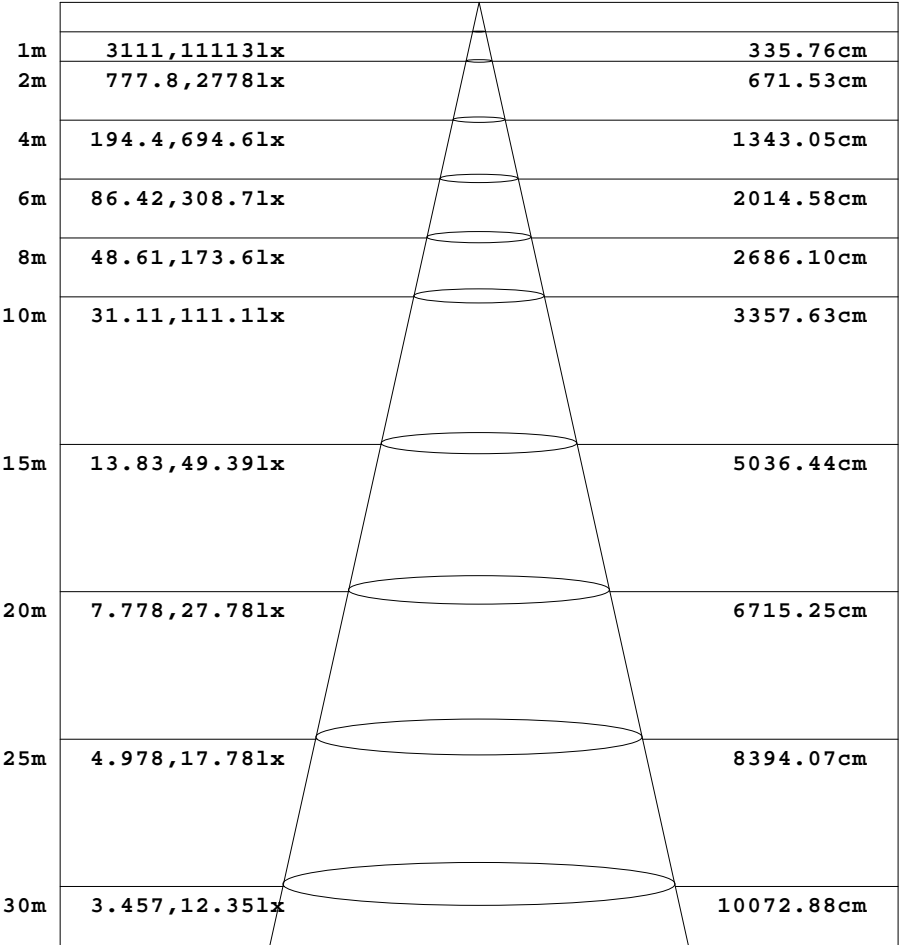
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

AAI Figure

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

Flux out:28168 lm



Height Eavg, Emax Angle:118.44deg Diameter

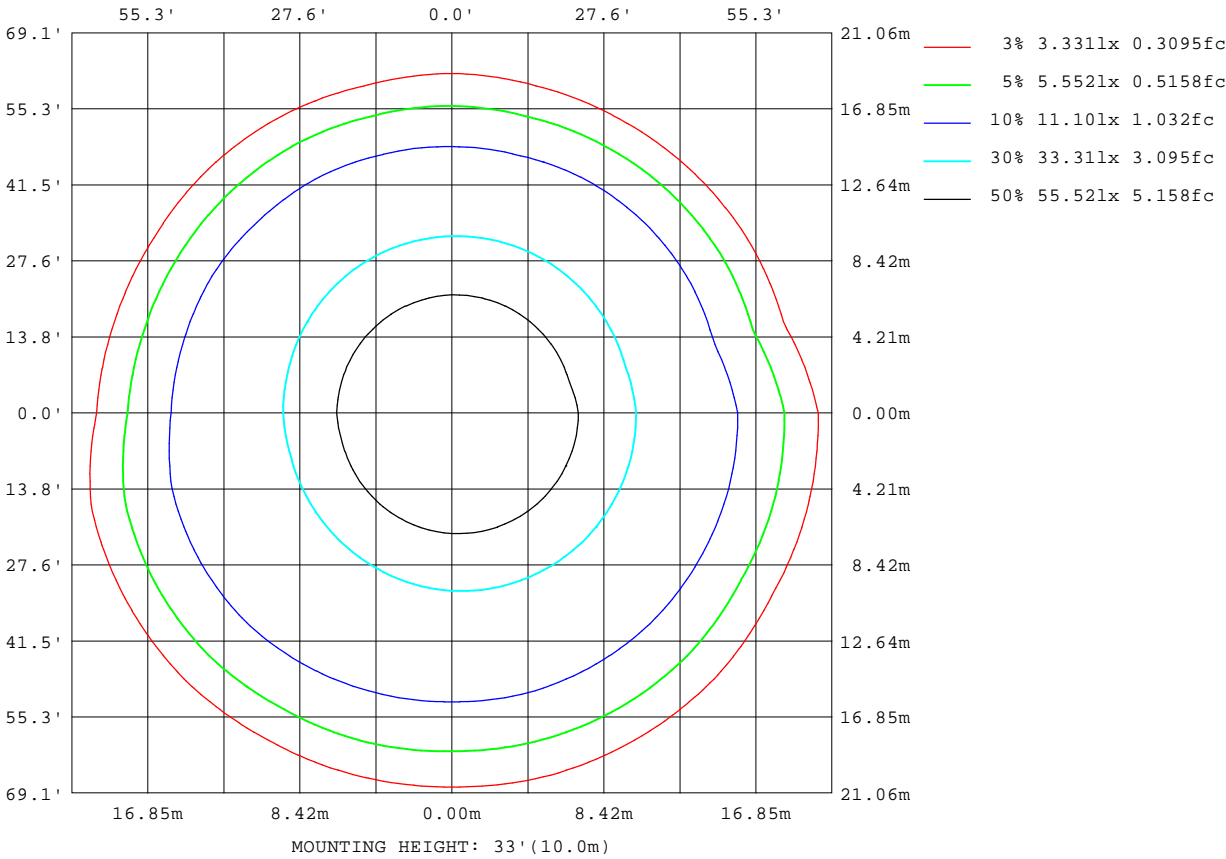
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 11.900m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:224.8V I:0.9244A P:201.3W PF:0.9686 Freq:59.98Hz Lamp Flux:32405.1x1 lm		
NAME: RK-HBL200W-02-G20-120D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

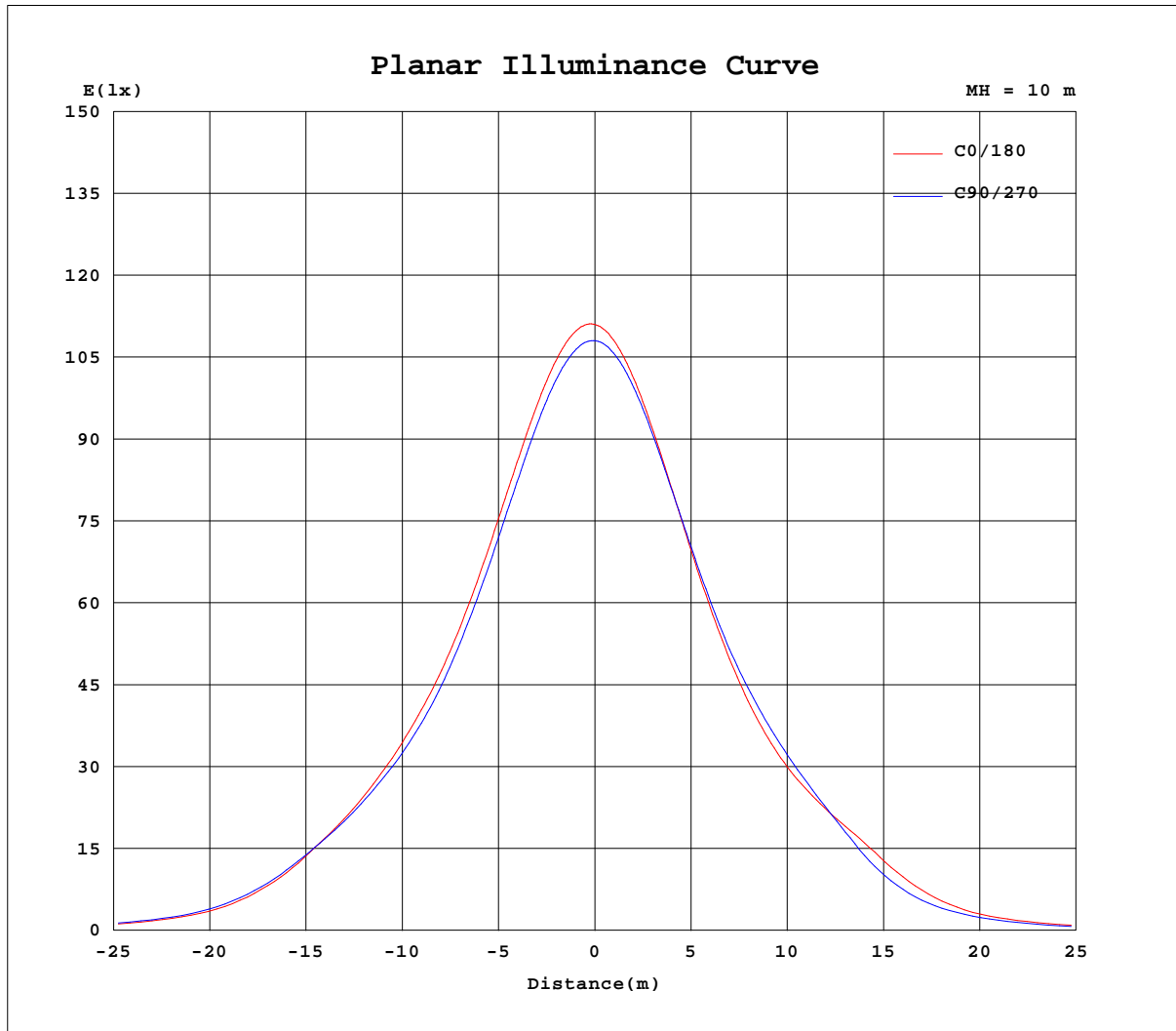
AvgL	cd/m2
L_0~180(65)av	173911
L_0~180(75)av	60826
L_0~180(85)av	4822
L_90~270(65)av	167632
L_90~270(75)av	62787
L_90~270(85)av	6121
L_45(65)av	171122
L_45(75)av	60559
L_45(85)av	5551

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:11.900m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 04 January 2023

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 11.900m [K=1.0000]
 Remarks:

