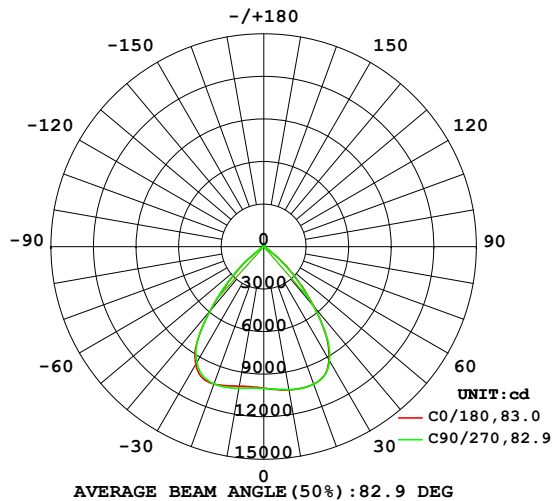


LUMINAIRE PHOTOMETRIC TEST REPORT

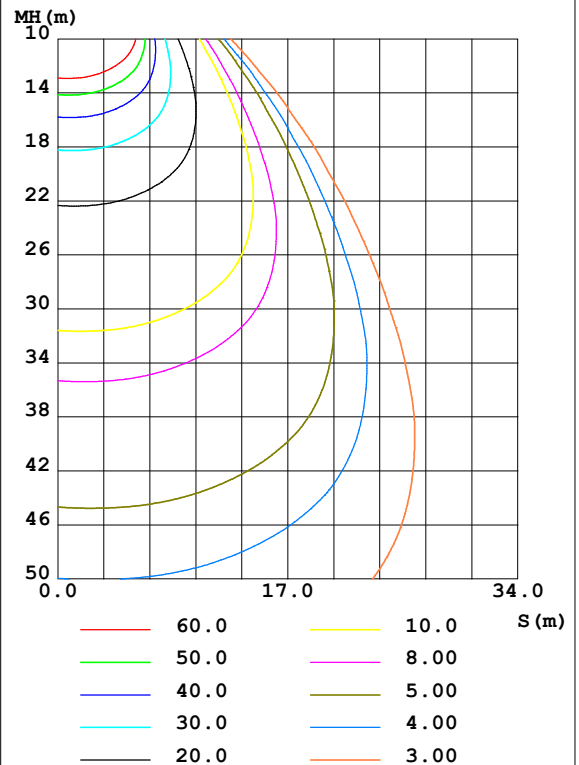
Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm		
NAME: H17-RAL-120W-3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 139.46 lm/W			
MODEL		I _{max} (cd)	10367	S/MH (C0/180)	1.21
NOMINAL POWER (W)	120	LOR (%)	100.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	16952	□ UP, DN (C0-180)	0.5, 48.8
NOMINAL FLUX (lm)	16951.8	CIE CLASS	DIRECT	□ UP, DN (C180-360)	0.5, 50.2
LAMPS INSIDE	1	□ up (%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	□ down (%)	99.0	CIBSE SHR MAX	1.25

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1DEG
Operators: Marvin Ma
Test Date: 2022-09-01

□ Range: 0 - 180DEG
□ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
Humidity: 56%
Test Distance: 6.500m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

°	C0	C45	C90	C135	C180	C225	C270	C315	°	□ zone	□ total	%lum, lamp
10	1027	1028	1024	1012	999.4	1000	1014	1026	0- 10	962.9	962.9	5.68,5.68
20	1031	1034	1032	1035	1031	1030	1029	1032	10- 20	2913	3876	22.9,22.9
30	921.8	914.8	928.7	957.1	959.2	964.1	945.3	926.9	20- 30	4631	8506	50.2,50.2
40	551.8	521.7	541.9	581.6	585.7	618.3	588.9	550.9	30- 40	4849	13356	78.8,78.8
50	181.4	162.7	170.7	183.5	178.3	196.3	192.0	172.9	40- 50	2742	16097	95,95
60	14.41	11.98	12.49	13.43	12.91	16.21	17.31	15.61	50- 60	583.0	16680	98.4,98.4
70	3.736	3.290	3.394	3.587	3.558	4.338	4.953	4.535	60- 70	71.74	16752	98.8,98.8
80	1.258	1.176	1.162	1.181	1.109	1.331	1.497	1.413	70- 80	25.26	16777	99,99
90	0.2489	0.2614	0.2553	0.2523	0.2292	0.2081	0.2058	0.2191	80- 90	6.746	16784	99,99
100	0.5699	0.5909	0.5904	0.5506	0.5153	0.4765	0.4873	0.5106	90-100	3.953	16788	99,99
110	1.233	1.254	1.261	1.167	1.137	1.046	1.104	1.125	100-110	8.661	16797	99.1,99.1
120	2.235	2.218	2.268	2.099	2.093	1.943	2.084	2.060	110-120	16.04	16813	99.2,99.2
130	3.416	3.299	3.454	3.174	3.300	3.032	3.281	3.166	120-130	24.06	16837	99.3,99.3
140	4.487	4.374	4.512	4.247	4.436	4.129	4.471	4.266	130-140	29.53	16866	99.5,99.5
150	5.334	5.456	5.410	5.372	5.395	5.345	5.414	5.486	140-150	30.60	16897	99.7,99.7
160	6.411	6.498	6.526	6.404	6.484	6.431	6.508	6.600	150-160	27.25	16924	99.8,99.8
170	7.629	7.597	7.690	7.520	7.654	7.561	7.686	7.694	160-170	19.88	16944	100,100
180	8.362	8.252	8.364	8.281	8.355	8.260	8.361	8.289	170-180	7.556	16952	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 15041 lm

%lum = 88.7%

%lamp = 88.7%

Conical surface Flux(120deg): 16680 lm

%lum = 98.4%

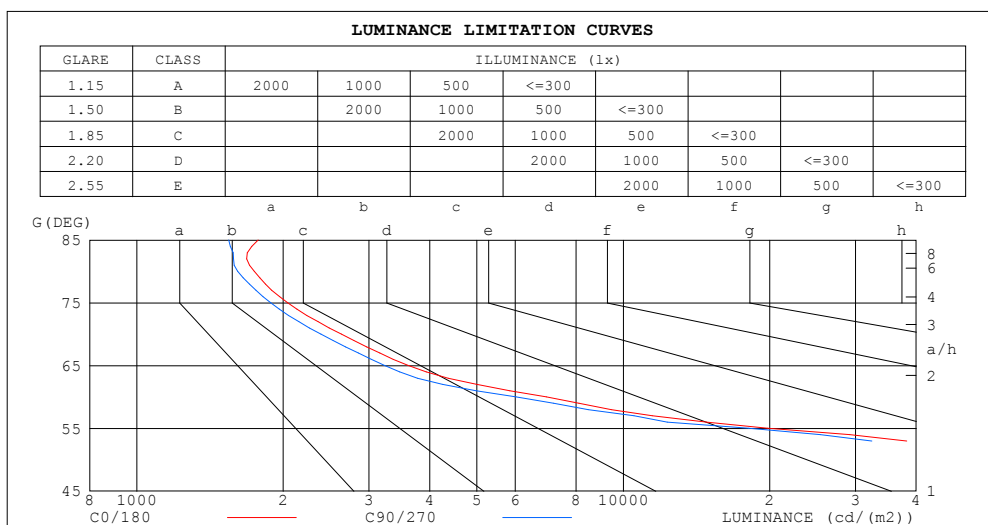
%lamp = 98.4%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Marvin Ma
 Test Date:2022-09-01

□ Range: 0 - 180DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm		
NAME: H17-RAL-120W-3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1777	1545
80	1745	1613
75	2042	1885
70	2632	2391
65	3618	3231
60	6946	6019
55	19783	18108
50	67989	63990
45	117573	112558

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1DEG
Operators:Marvin Ma
Test Date:2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
Humidity:56%
Test Distance:6.500m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm					
NAME: H17-RAL-120W-3K			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.: RAB LIGHTING INC			SUR.:0.23		Shielding Angle:

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.202	.115	.036	.194	.111	.035	.181	.104	.033	.169	.097	.031	.158	.091	.029	
2.0	.196	.108	.033	.190	.105	.032	.179	.099	.031	.168	.094	.030	.159	.090	.028	
3.0	.189	.100	.030	.183	.098	.030	.174	.094	.029	.164	.090	.028	.156	.086	.027	
4.0	.180	.094	.028	.176	.092	.027	.167	.089	.026	.159	.086	.026	.152	.082	.025	
5.0	.172	.088	.025	.168	.086	.025	.161	.084	.025	.154	.081	.024	.147	.079	.024	
6.0	.165	.082	.024	.161	.081	.023	.154	.079	.023	.148	.077	.023	.142	.075	.022	
7.0	.157	.078	.022	.154	.077	.022	.148	.075	.022	.142	.073	.021	.137	.071	.021	
8.0	.150	.073	.021	.147	.072	.020	.142	.071	.020	.136	.069	.020	.132	.068	.020	
9.0	.143	.069	.019	.141	.069	.019	.136	.067	.019	.131	.066	.019	.127	.064	.019	
10.0	.137	.066	.018	.135	.065	.018	.130	.064	.018	.126	.063	.018	.122	.061	.018	

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.198	.198	.198	.169	.169	.169	.116	.116	.116	.066	.066	.066	.021	.021	.021	
1.0	.180	.165	.151	.154	.141	.130	.106	.097	.090	.061	.056	.052	.019	.018	.017	
2.0	.167	.140	.117	.143	.121	.101	.098	.083	.071	.057	.049	.041	.018	.016	.013	
3.0	.156	.121	.093	.134	.105	.081	.092	.073	.057	.053	.043	.034	.017	.014	.011	
4.0	.148	.107	.076	.127	.093	.066	.087	.065	.047	.050	.038	.028	.016	.012	.009	
5.0	.140	.096	.064	.120	.083	.055	.083	.058	.039	.048	.034	.023	.015	.011	.008	
6.0	.133	.087	.054	.115	.075	.047	.079	.053	.033	.046	.031	.020	.015	.010	.007	
7.0	.127	.080	.047	.110	.069	.041	.076	.049	.029	.044	.029	.017	.014	.009	.006	
8.0	.122	.074	.041	.105	.064	.036	.073	.045	.025	.042	.027	.015	.014	.009	.005	
9.0	.117	.069	.037	.101	.060	.032	.070	.042	.023	.041	.025	.014	.013	.008	.004	
10.0	.112	.065	.033	.097	.056	.029	.067	.040	.021	.039	.023	.012	.013	.008	.004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Marvin Ma
 Test Date:2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm										
NAME: H17-RAL-120W-3K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: RAB LIGHTING INC					SUR.:0.23			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	25.2	26.3	25.5	26.5	26.7	25.1	26.2	25.4	26.4	26.6
3H	25.0	26.0	25.3	26.3	26.5	24.9	26.0	25.2	26.2	26.4
4H	24.9	25.9	25.2	26.1	26.4	24.8	25.8	25.1	26.1	26.3
6H	24.8	25.7	25.1	26.0	26.3	24.8	25.6	25.1	25.9	26.2
8H	24.8	25.6	25.1	25.9	26.2	24.7	25.6	25.0	25.8	26.1
12H	24.7	25.6	25.1	25.8	26.1	24.7	25.5	25.0	25.8	26.1
4H 2H	24.9	25.9	25.2	26.1	26.4	24.9	25.8	25.2	26.1	26.3
3H	24.7	25.6	25.1	25.9	26.2	24.7	25.5	25.0	25.8	26.1
4H	24.7	25.4	25.0	25.7	26.0	24.6	25.3	24.9	25.6	26.0
6H	24.6	25.2	25.0	25.6	25.9	24.5	25.1	24.9	25.5	25.9
8H	24.5	25.1	24.9	25.5	25.9	24.4	25.0	24.9	25.4	25.8
12H	24.5	25.0	24.9	25.4	25.8	24.4	24.9	24.8	25.3	25.7
8H 4H	24.5	25.1	24.9	25.5	25.9	24.4	25.0	24.9	25.4	25.8
6H	24.4	24.9	24.9	25.3	25.8	24.3	24.8	24.8	25.2	25.7
8H	24.4	24.8	24.8	25.2	25.7	24.3	24.7	24.8	25.2	25.6
12H	24.3	24.7	24.8	25.1	25.6	24.2	24.6	24.7	25.1	25.6
12H 4H	24.5	25.0	24.9	25.4	25.8	24.4	24.9	24.8	25.3	25.7
6H	24.4	24.8	24.8	25.2	25.7	24.3	24.7	24.8	25.2	25.6
8H	24.3	24.7	24.8	25.1	25.6	24.2	24.6	24.7	25.1	25.6
Variations with the observer position at spacings:										
S = 1.0H	+ 2.5 / -12.7					+ 2.5 / -13.1				
1.5H	+ 3.4 / -10.8					+ 3.5 / -11.2				
2.0H	+ 6.2 / -14.1					+ 6.2 / -14.1				

CIE Pub.117, 16952 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 9.8$)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Marvin Ma
 Test Date:2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm		
NAME: H17-RAL-120W-3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

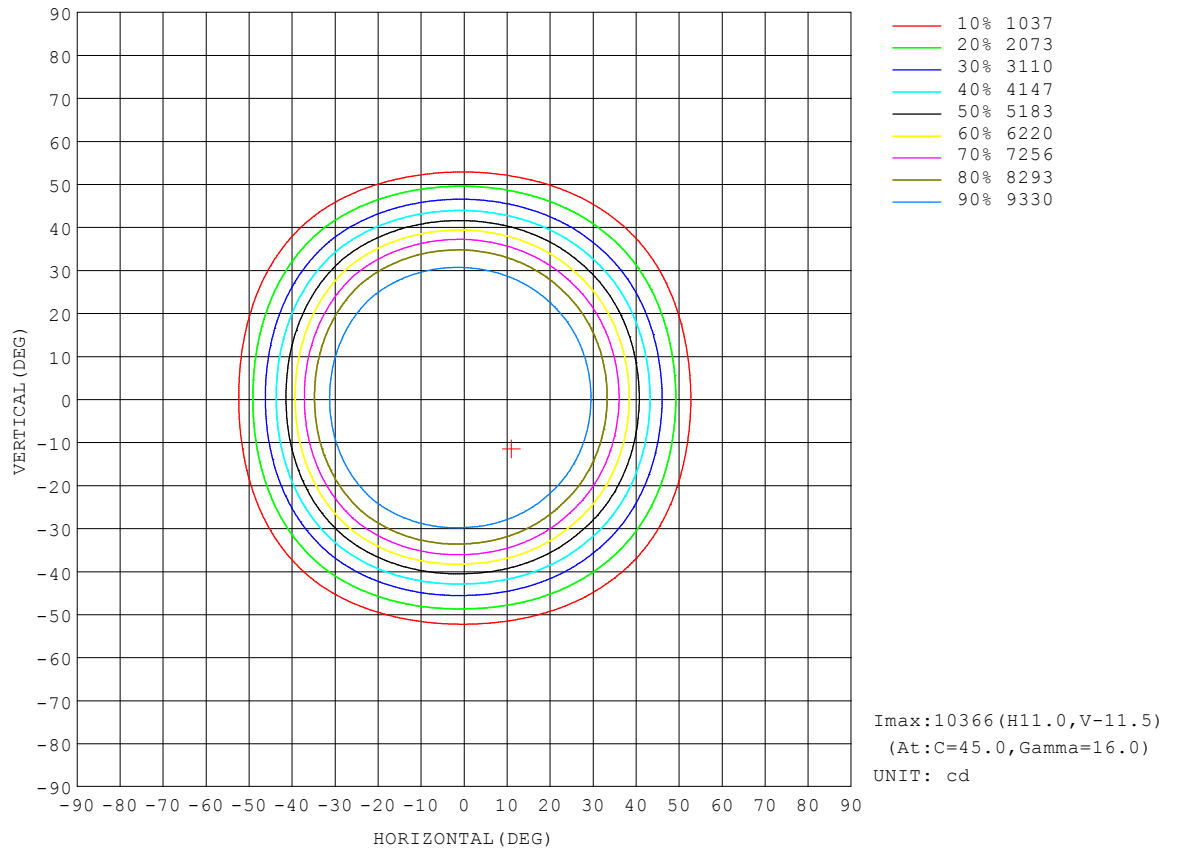
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	70	65	76	69	65	61
0.80	87	80	75	86	79	75	85	78	74	70
1.00	93	86	82	92	86	82	91	86	81	76
1.25	99	92	88	97	92	88	95	90	87	82
1.50	102	96	92	101	95	92	98	94	90	85
2.00	106	101	97	104	100	96	101	98	95	89
2.50	108	103	100	106	102	99	103	99	97	90
3.00	110	106	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	104	106	104	102	94
5.00	113	110	108	111	109	106	107	105	103	95
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.1DEG
 Operators: Marvin Ma
 Test Date: 2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity: 56%
 Test Distance: 6.500m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm		
NAME: H17-RAL-120W-3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

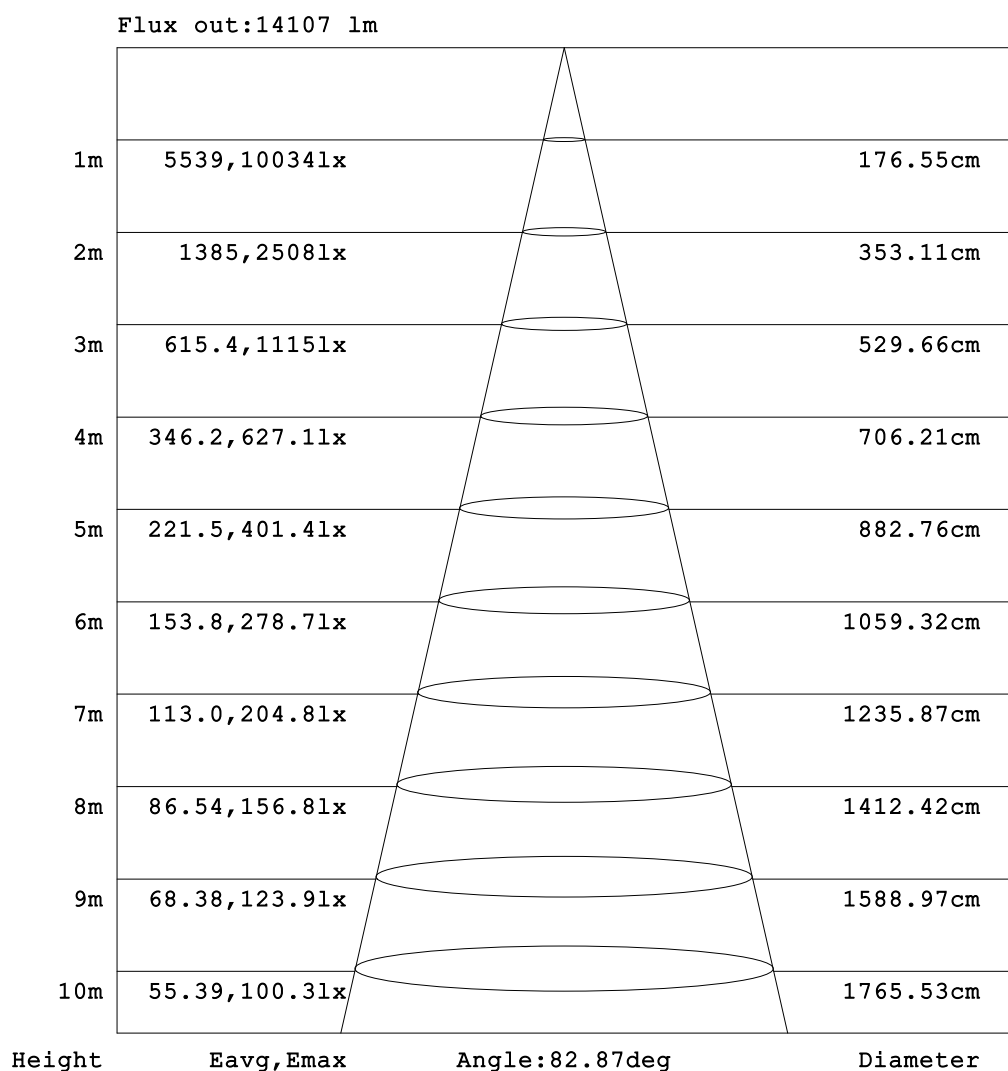


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1DEG
Operators:Marvin Ma
Test Date:2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
Humidity:56%
Test Distance:6.500m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm		
NAME: H17-RAL-120W-3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

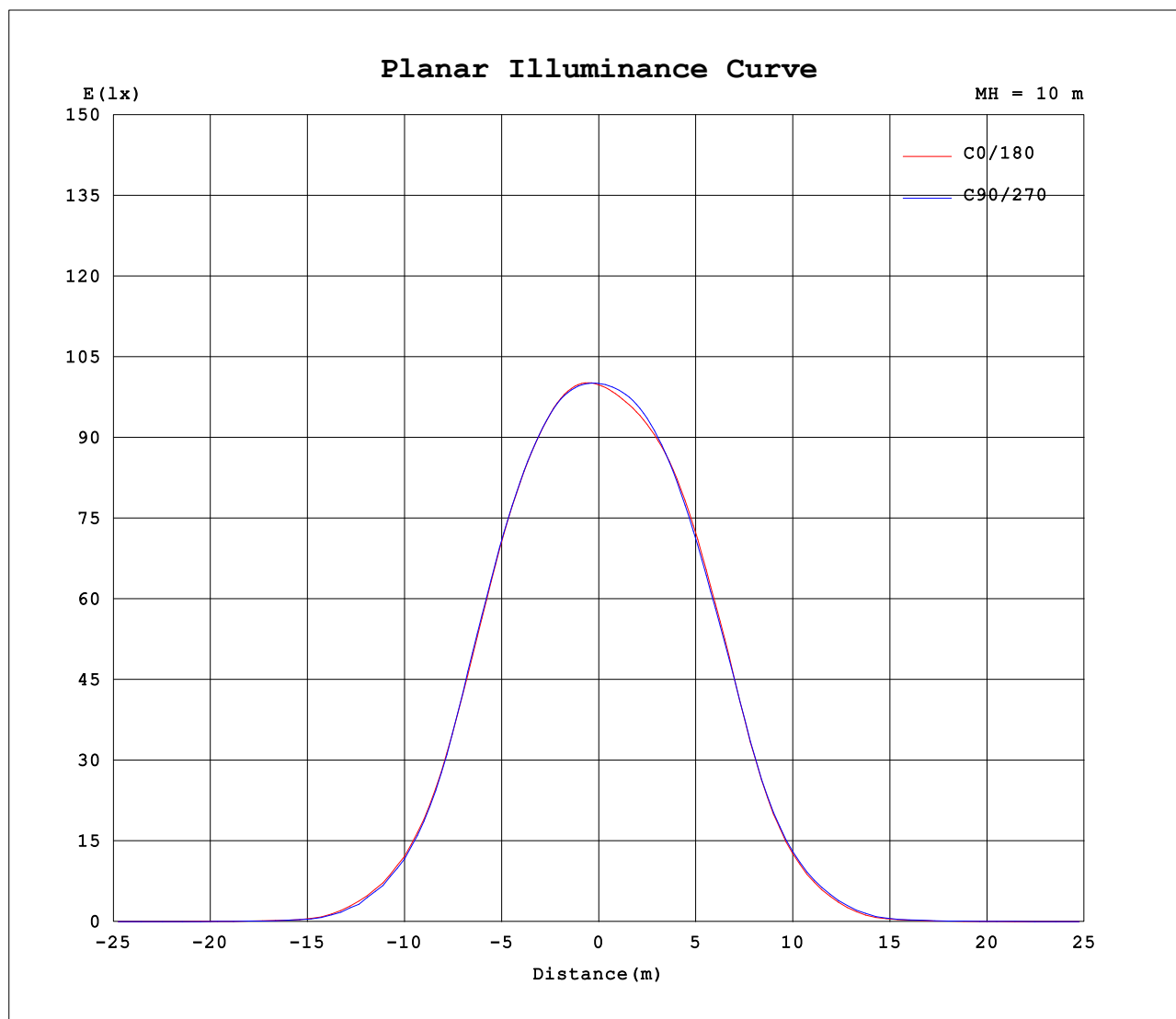


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.1DEG
 Operators: Marvin Ma
 Test Date: 2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity: 56%
 Test Distance: 6.500m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.1DEG
Operators: Marvin Ma
Test Date: 2022-09-01

☐ Range: 0 - 180DEG
☐ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
Humidity: 56%
Test Distance: 6.500m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.6V I:1.010A P:121.6W PF:0.9979 Freq:59.98Hz Lamp Flux:16951.8x1 lm		
NAME: H17-RAL-120W-3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

Table--1

UNIT: ×10cd

C (DEG) □ (DEG)	0	45	90	135	180	225	270	315										
0	998	1000	1000	1002	998	1000	1000	1002										
5	1012	1014	1009	1001	993	994	1003	1012										
10	1027	1028	1024	1012	999	1000	1014	1026										
15	1034	1036	1034	1027	1016	1016	1026	1035										
20	1031	1034	1032	1035	1031	1030	1029	1032										
25	1006	1008	1007	1021	1022	1021	1009	1006										
30	922	915	929	957	959	964	945	927										
35	770	747	773	818	820	846	820	782										
40	552	522	542	582	586	618	589	551										
45	345	322	330	357	358	383	369	340										
50	181	163	171	184	178	196	192	173										
55	47.1	40.5	43.1	46.6	42.6	57.6	51.6	45.4										
60	14.4	12.0	12.5	13.4	12.9	16.2	17.3	15.6										
65	6.34	5.45	5.67	5.97	5.97	7.23	8.19	7.54										
70	3.74	3.29	3.39	3.59	3.56	4.34	4.95	4.53										
75	2.19	1.99	2.03	2.12	2.06	2.50	2.85	2.63										
80	1.26	1.18	1.16	1.18	1.11	1.33	1.50	1.41										
85	0.64	0.59	0.56	0.57	0.47	0.56	0.62	0.62										
90	0.25	0.26	0.26	0.25	0.23	0.21	0.21	0.22										
95	0.37	0.39	0.39	0.37	0.34	0.31	0.31	0.33										
100	0.57	0.59	0.59	0.55	0.52	0.48	0.49	0.51										
105	0.85	0.88	0.88	0.82	0.78	0.72	0.75	0.77										
110	1.23	1.25	1.26	1.17	1.14	1.05	1.10	1.12										
115	1.70	1.70	1.73	1.60	1.58	1.46	1.55	1.56										
120	2.24	2.22	2.27	2.10	2.09	1.94	2.08	2.06										
125	2.82	2.76	2.86	2.64	2.70	2.48	2.67	2.61										
130	3.42	3.30	3.45	3.17	3.30	3.03	3.28	3.17										
135	4.00	3.83	4.04	3.72	3.91	3.59	3.91	3.72										
140	4.49	4.37	4.51	4.25	4.44	4.13	4.47	4.27										
145	4.90	4.96	4.96	4.87	4.91	4.75	4.95	4.91										
150	5.33	5.46	5.41	5.37	5.40	5.34	5.41	5.49										
155	5.82	5.94	5.92	5.85	5.90	5.85	5.93	6.03										
160	6.41	6.50	6.53	6.40	6.48	6.43	6.51	6.60										
165	7.05	7.08	7.15	6.98	7.10	7.02	7.12	7.18										
170	7.63	7.60	7.69	7.52	7.65	7.56	7.69	7.69										
175	8.07	7.99	8.12	7.97	8.06	7.98	8.11	8.08										
180	8.36	8.25	8.36	8.28	8.35	8.26	8.36	8.29										

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Marvin Ma
 Test Date:2022-09-01

□ Range: 0 - 180DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks: