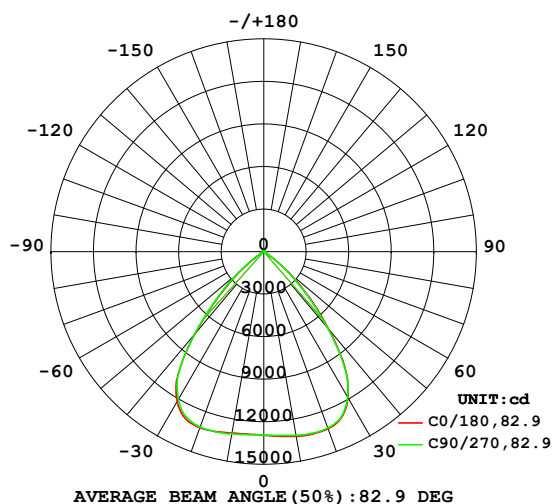


LUMINAIRE PHOTOMETRIC TEST REPORT

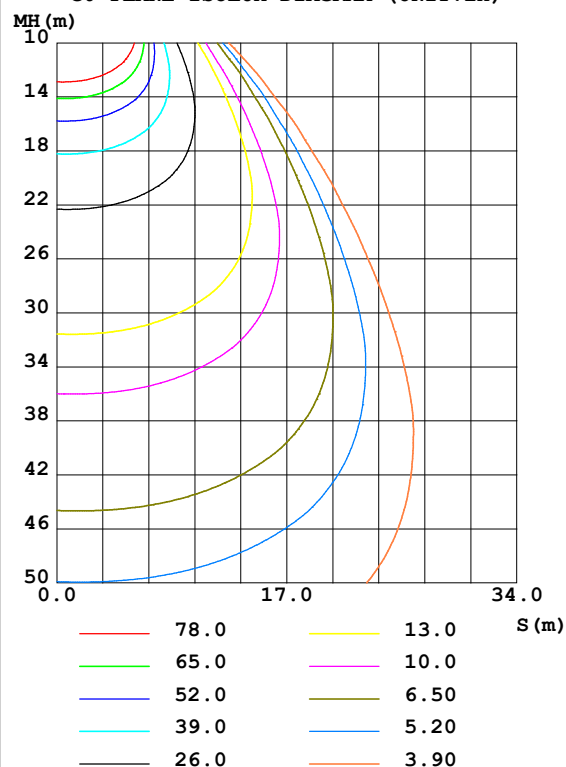
Test:U:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm		
NAME: H17-RAL-150W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.63 lm/W			
MODEL		I _{max} (cd)	13326	S/MH(C0/180)	1.20
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.21
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	21764	□ UP,DN(C0-180)	0.5,49.0
NOMINAL FLUX(lm)	21764	CIE CLASS	DIRECT	□ UP,DN(C180-360)	0.5,50.0
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	1322	1321	1315	1304	1299	1296	1305	1316	0- 10	1243	1243	5.71,5.71
20	1329	1326	1323	1320	1321	1317	1316	1320	10- 20	3741	4984	22.9,22.9
30	1189	1174	1185	1221	1222	1227	1206	1180	20- 30	5915	10899	50.1,50.1
40	715.8	673.9	698.6	763.2	754.5	796.5	763.9	701.1	30- 40	6235	17133	78.7,78.7
50	237.8	205.9	209.9	240.9	227.2	249.2	245.0	218.1	40- 50	3521	20654	94.9,94.9
60	19.03	16.19	16.23	18.46	17.50	21.06	22.19	19.71	50- 60	758.5	21413	98.4,98.4
70	4.917	4.342	4.468	4.844	4.699	5.683	6.473	5.843	60- 70	94.34	21507	98.8,98.8
80	1.658	1.553	1.537	1.603	1.467	1.746	1.958	1.806	70- 80	33.23	21540	99,99
90	0.3236	0.3385	0.3316	0.3237	0.2989	0.2719	0.2673	0.2887	80- 90	8.858	21549	99,99
100	0.7309	0.7621	0.7566	0.7006	0.6707	0.6136	0.6299	0.6635	90-100	5.109	21554	99,99
110	1.584	1.611	1.619	1.483	1.471	1.347	1.422	1.460	100-110	11.14	21565	99.1,99.1
120	2.871	2.839	2.912	2.665	2.703	2.490	2.670	2.652	110-120	20.59	21586	99.2,99.2
130	4.387	4.222	4.431	4.039	4.244	3.883	4.204	4.067	120-130	30.85	21617	99.3,99.3
140	5.758	5.606	5.781	5.409	5.717	5.289	5.735	5.474	130-140	37.86	21655	99.5,99.5
150	6.838	6.996	6.925	6.865	6.943	6.837	6.930	7.039	140-150	39.24	21694	99.7,99.7
160	8.217	8.321	8.352	8.171	8.338	8.243	8.320	8.458	150-160	34.92	21729	99.8,99.8
170	9.764	9.732	9.828	9.593	9.840	9.667	9.827	9.841	160-170	25.45	21754	100,100
180	10.73	10.58	10.70	10.59	10.74	10.57	10.70	10.60	170-180	9.670	21764	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 19303 lm

%lum = 88.7%

%lamp = 88.7%

Conical surface Flux(120deg): 21413 lm

%lum = 98.4%

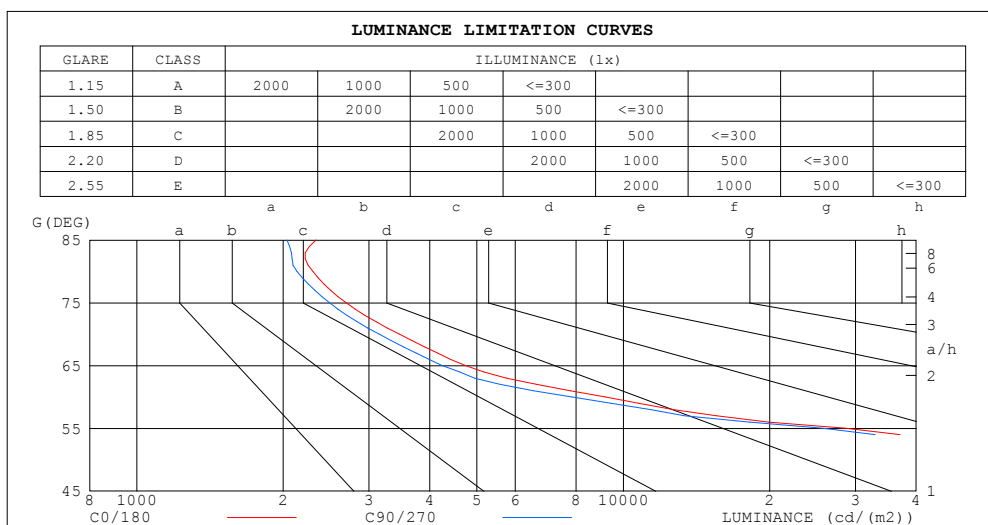
%lamp = 98.4%

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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm		
NAME: H17-RAL-150W-5K	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	2338	2036
80	2300	2132
75	2693	2490
70	3464	3148
65	4732	4237
60	9170	7819
55	28640	25738
50	89130	78695
45	153303	146361

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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm					
NAME: H17-RAL-150W-5K			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	.195	.111	.035	.181	.104	.033	.169	.098	.031	.158	.091	.029		
2.0	.196	.108	.033	.190	.105	.032	.179	.100	.031	.168	.095	.030	.159	.090	.028		
3.0	.189	.100	.030	.183	.098	.030	.174	.094	.029	.165	.090	.028	.156	.086	.027		
4.0	.181	.094	.028	.176	.092	.027	.167	.089	.027	.159	.086	.026	.152	.083	.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	.115	.115	.115	.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	.157	.121	.093	.134	.105	.081	.092	.073	.057	.053	.042	.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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm										
NAME: H17-RAL-150W-5K					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	26.1	27.2	26.3	27.4	27.6	25.9	27.1	26.2	27.3	27.5
3H	25.9	26.9	26.2	27.1	27.4	25.8	26.8	26.0	27.0	27.2
4H	25.8	26.8	26.1	27.0	27.3	25.7	26.6	26.0	26.9	27.1
6H	25.7	26.6	26.0	26.9	27.1	25.6	26.5	25.9	26.7	27.0
8H	25.7	26.5	26.0	26.8	27.1	25.5	26.4	25.9	26.7	27.0
12H	25.6	26.4	26.0	26.7	27.0	25.5	26.3	25.8	26.6	26.9
4H 2H	25.8	26.8	26.1	27.0	27.3	25.7	26.6	26.0	26.9	27.1
3H	25.6	26.4	26.0	26.7	27.0	25.5	26.3	25.8	26.6	26.9
4H	25.5	26.3	25.9	26.6	26.9	25.4	26.1	25.8	26.5	26.8
6H	25.4	26.1	25.8	26.4	26.8	25.3	26.0	25.7	26.3	26.7
8H	25.4	26.0	25.8	26.4	26.8	25.3	25.9	25.7	26.2	26.6
12H	25.3	25.9	25.8	26.3	26.7	25.2	25.8	25.6	26.1	26.6
8H 4H	25.4	26.0	25.8	26.4	26.8	25.3	25.9	25.7	26.2	26.6
6H	25.3	25.8	25.7	26.2	26.6	25.2	25.6	25.6	26.1	26.5
8H	25.2	25.7	25.7	26.1	26.6	25.1	25.5	25.6	26.0	26.4
12H	25.2	25.6	25.7	26.0	26.5	25.1	25.4	25.6	25.9	26.4
12H 4H	25.3	25.9	25.8	26.3	26.7	25.2	25.8	25.6	26.1	26.6
6H	25.2	25.7	25.7	26.1	26.6	25.1	25.5	25.6	26.0	26.4
8H	25.2	25.6	25.7	26.0	26.5	25.1	25.4	25.5	25.9	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.5 / -12.6					+ 2.5 / -13.2				
1.5H	+ 3.4 / -10.2					+ 3.5 / -10.2				
2.0H	+ 6.3 / -13.9					+ 6.4 / -13.9				

CIE Pub.117, 21764 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 10.7$)

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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm		
NAME: H17-RAL-150W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

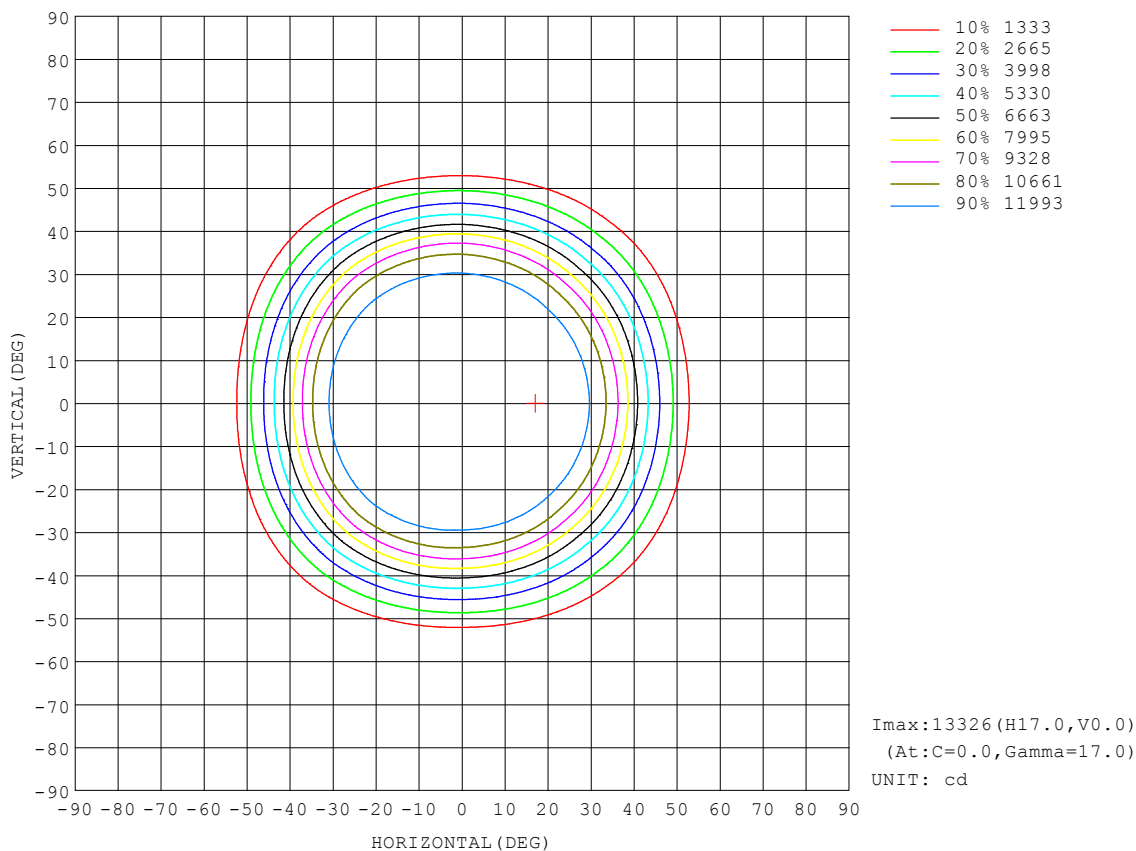
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	70	65	76	69	65	60
0.80	87	79	75	86	79	75	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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm		
NAME: H17-RAL-150W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

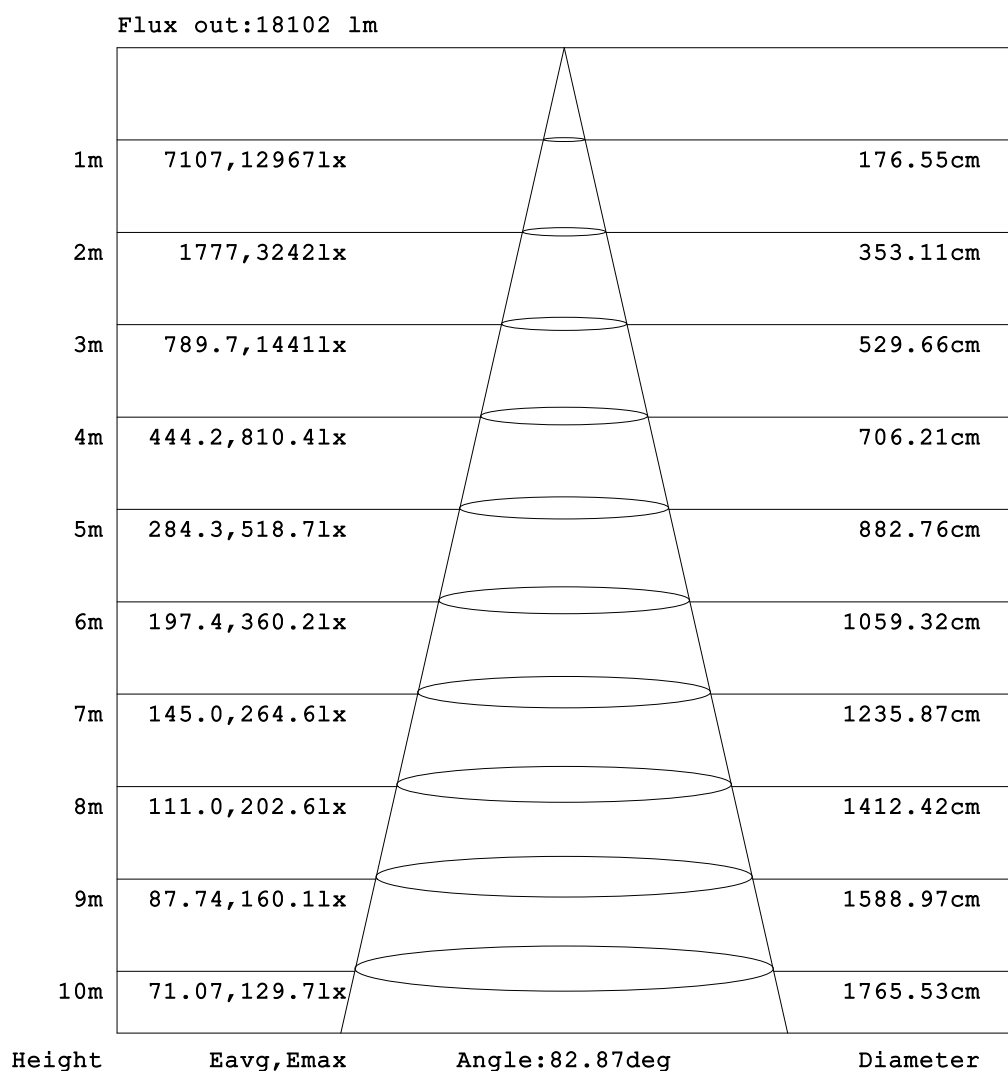


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1DEG
Operators:Marvin Ma
Test Date:2022-09-01

☐ 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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm		
NAME: H17-RAL-150W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

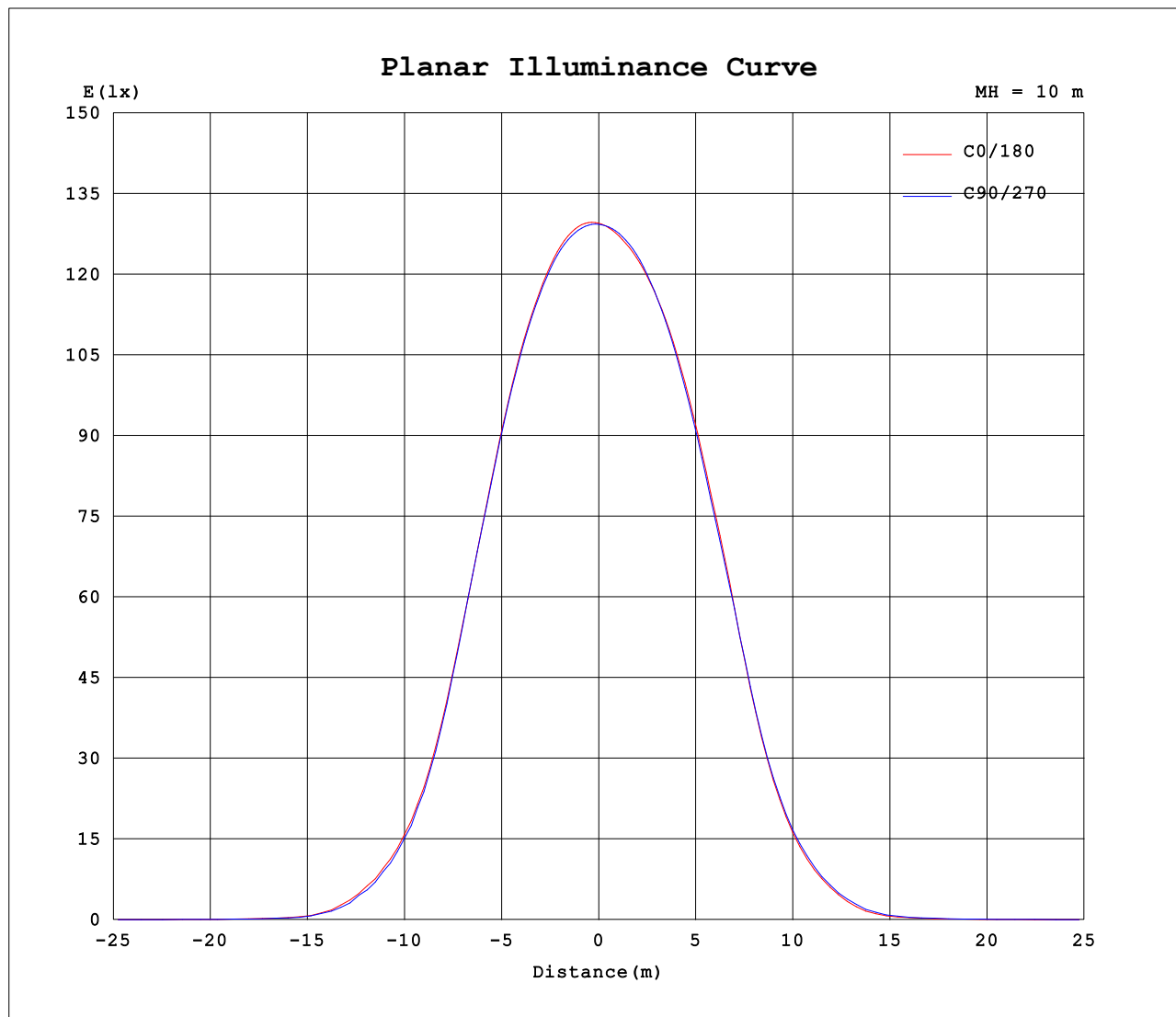


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:120.5V I:1.226A P:147.4W PF:0.9979 Freq:59.98Hz Lamp Flux:21764x1 lm								
NAME: H17-RAL-150W-5K					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	1295	1293	1293	1294	1295	1293	1293	1294										
5	1307	1305	1301	1294	1291	1289	1295	1303										
10	1322	1321	1315	1304	1299	1296	1305	1316										
15	1332	1330	1325	1316	1313	1309	1315	1325										
20	1329	1326	1323	1320	1321	1317	1316	1320										
25	1293	1287	1288	1300	1302	1299	1289	1281										
30	1189	1174	1185	1221	1222	1227	1206	1180										
35	1002	972	995	1056	1054	1083	1052	1002										
40	716	674	699	763	754	797	764	701										
45	450	418	429	466	459	489	473	427										
50	238	206	210	241	227	249	245	218										
55	68.2	49.3	61.3	68.0	58.1	73.6	74.7	62.6										
60	19.0	16.2	16.2	18.5	17.5	21.1	22.2	19.7										
65	8.30	7.18	7.43	8.06	7.88	9.44	10.7	9.71										
70	4.92	4.34	4.47	4.84	4.70	5.68	6.47	5.84										
75	2.89	2.63	2.67	2.87	2.73	3.28	3.73	3.38										
80	1.66	1.55	1.54	1.60	1.47	1.75	1.96	1.81										
85	0.85	0.77	0.74	0.78	0.62	0.72	0.80	0.77										
90	0.32	0.34	0.33	0.32	0.30	0.27	0.27	0.29										
95	0.48	0.50	0.50	0.47	0.44	0.40	0.40	0.43										
100	0.73	0.76	0.76	0.70	0.67	0.61	0.63	0.66										
105	1.10	1.13	1.13	1.03	1.01	0.92	0.96	1.00										
110	1.58	1.61	1.62	1.48	1.47	1.35	1.42	1.46										
115	2.18	2.19	2.22	2.03	2.04	1.87	1.99	2.01										
120	2.87	2.84	2.91	2.66	2.70	2.49	2.67	2.65										
125	3.63	3.53	3.67	3.35	3.48	3.18	3.43	3.36										
130	4.39	4.22	4.43	4.04	4.24	3.88	4.20	4.07										
135	5.13	4.91	5.18	4.73	5.04	4.59	5.02	4.77										
140	5.76	5.61	5.78	5.41	5.72	5.29	5.74	5.47										
145	6.29	6.36	6.35	6.21	6.33	6.10	6.34	6.30										
150	6.84	7.00	6.93	6.86	6.94	6.84	6.93	7.04										
155	7.47	7.61	7.58	7.47	7.59	7.55	7.58	7.73										
160	8.22	8.32	8.35	8.17	8.34	8.24	8.32	8.46										
165	9.03	9.06	9.14	8.91	9.14	8.99	9.10	9.20										
170	9.76	9.73	9.83	9.59	9.84	9.67	9.83	9.84										
175	10.3	10.2	10.4	10.2	10.4	10.2	10.4	10.3										
180	10.7	10.6	10.7	10.6	10.7	10.6	10.7	10.6										

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: