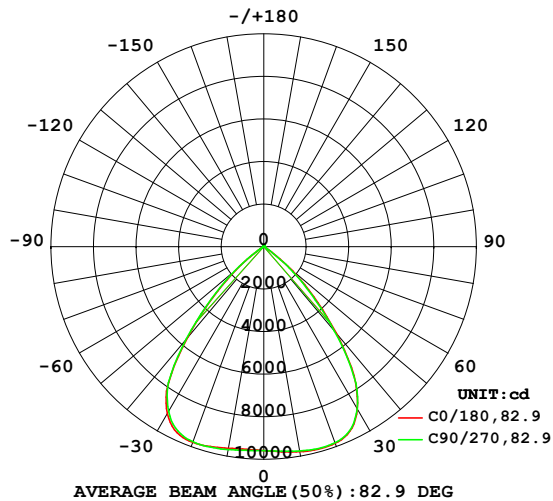


LUMINAIRE PHOTOMETRIC TEST REPORT

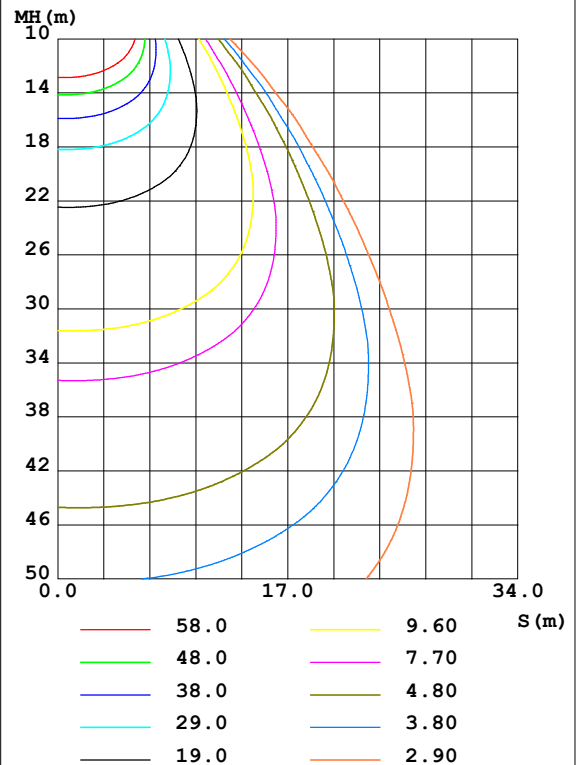
Test:U:120.6V I:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.13 lm/W			
MODEL		I _{max} (cd)	9864	S/MH(C0/180)	1.20
NOMINAL POWER(W)	100	LOR(%)	100.0	S/MH(C90/270)	1.21
RATED VOLTAGE(V)	100	TOTAL FLUX(lm)	16144	□ UP,DN(C0-180)	0.5,48.8
NOMINAL FLUX(lm)	16144.4	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	9787	9791	9752	9680	9623	9620	9686	9762	0- 10	921.8	921.8	5.71,5.71
20	9836	9827	9806	9798	9791	9778	9759	9793	10- 20	2774	3696	22.9,22.9
30	8808	8711	8788	9032	9066	9111	8951	8795	20- 30	4388	8084	50.1,50.1
40	5295	4988	5170	5562	5591	5911	5673	5266	30- 40	4621	12705	78.7,78.7
50	1768	1525	1564	1702	1701	1858	1816	1667	40- 50	2613	15318	94.9,94.9
60	141.2	117.7	120.0	132.0	127.0	157.2	169.3	151.1	50- 60	565.7	15884	98.4,98.4
70	36.34	32.05	32.94	35.09	34.69	41.96	47.90	43.92	60- 70	69.83	15954	98.8,98.8
80	12.22	11.47	11.30	11.55	10.79	12.86	14.49	13.62	70- 80	24.53	15978	99,99
90	2.371	2.498	2.437	2.413	2.200	1.998	1.965	2.100	80- 90	6.522	15985	99,99
100	5.434	5.631	5.643	5.251	4.935	4.542	4.643	4.884	90-100	3.778	15988	99,99
110	11.79	11.99	12.08	11.18	10.89	9.970	10.49	10.73	100-110	8.274	15997	99.1,99.1
120	21.38	21.17	21.74	20.06	19.98	18.48	19.81	19.59	110-120	15.32	16012	99.2,99.2
130	32.68	31.51	33.08	30.34	31.54	28.82	31.20	30.05	120-130	22.96	16035	99.3,99.3
140	42.91	41.77	43.14	40.57	42.29	39.23	42.54	40.49	130-140	28.16	16063	99.5,99.5
150	50.96	52.13	51.66	51.37	51.39	50.89	51.43	52.13	140-150	29.18	16092	99.7,99.7
160	61.15	61.96	62.22	61.08	61.73	61.17	61.82	62.74	150-160	25.96	16118	99.8,99.8
170	72.65	72.33	73.20	71.67	72.90	71.87	73.03	73.18	160-170	18.92	16137	100,100
180	79.73	78.61	79.60	78.84	79.72	78.60	79.60	78.89	170-180	7.192	16144	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 14314 lm

%lum = 88.7%

%lamp = 88.7%

Conical surface Flux(120deg): 15884 lm

%lum = 98.4%

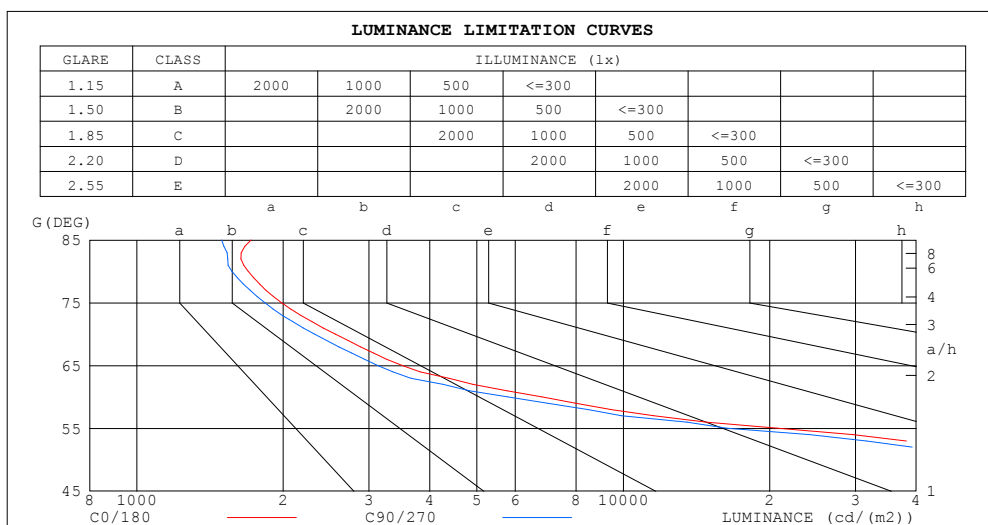
%lamp = 98.4%

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:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-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	1718	1495
80	1695	1568
75	1985	1834
70	2561	2320
65	3515	3126
60	6804	5785
55	20771	16337
50	66293	58622
45	113578	108613

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:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-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	.169 .095 .030	.159 .090 .028	
3.0	.189 .100 .030	.184 .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 .083 .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	.157 .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:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm										
NAME: H17-RAL-100W-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	25.0	26.2	25.3	26.4	26.5	24.9	26.0	25.1	26.2	26.4
3H	24.8	25.9	25.1	26.1	26.3	24.7	25.7	25.0	26.0	26.2
4H	24.8	25.7	25.1	26.0	26.2	24.6	25.6	24.9	25.8	26.1
6H	24.7	25.6	25.0	25.8	26.1	24.5	25.4	24.8	25.7	26.0
8H	24.6	25.5	24.9	25.8	26.0	24.5	25.3	24.8	25.6	25.9
12H	24.6	25.4	24.9	25.7	26.0	24.4	25.2	24.8	25.5	25.8
4H 2H	24.8	25.7	25.1	26.0	26.2	24.6	25.6	24.9	25.8	26.1
3H	24.6	25.4	24.9	25.7	26.0	24.4	25.3	24.8	25.6	25.9
4H	24.5	25.2	24.9	25.5	25.9	24.3	25.1	24.7	25.4	25.7
6H	24.4	25.0	24.8	25.4	25.8	24.3	24.9	24.7	25.3	25.6
8H	24.3	24.9	24.8	25.3	25.7	24.2	24.8	24.6	25.2	25.6
12H	24.3	24.8	24.7	25.2	25.6	24.2	24.7	24.6	25.1	25.5
8H 4H	24.3	24.9	24.8	25.3	25.7	24.2	24.8	24.6	25.2	25.6
6H	24.2	24.7	24.7	25.1	25.6	24.1	24.6	24.6	25.0	25.4
8H	24.2	24.6	24.7	25.1	25.5	24.1	24.5	24.5	24.9	25.4
12H	24.2	24.5	24.6	25.0	25.5	24.0	24.4	24.5	24.8	25.3
12H 4H	24.3	24.8	24.7	25.2	25.6	24.2	24.7	24.6	25.1	25.5
6H	24.2	24.6	24.7	25.1	25.5	24.1	24.5	24.5	24.9	25.4
8H	24.2	24.5	24.6	25.0	25.5	24.0	24.4	24.5	24.8	25.3
Variations with the observer position at spacings:										
S = 1.0H	+ 2.5 / -12.4					+ 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, 16144 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 9.7$)

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:120.6V I:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

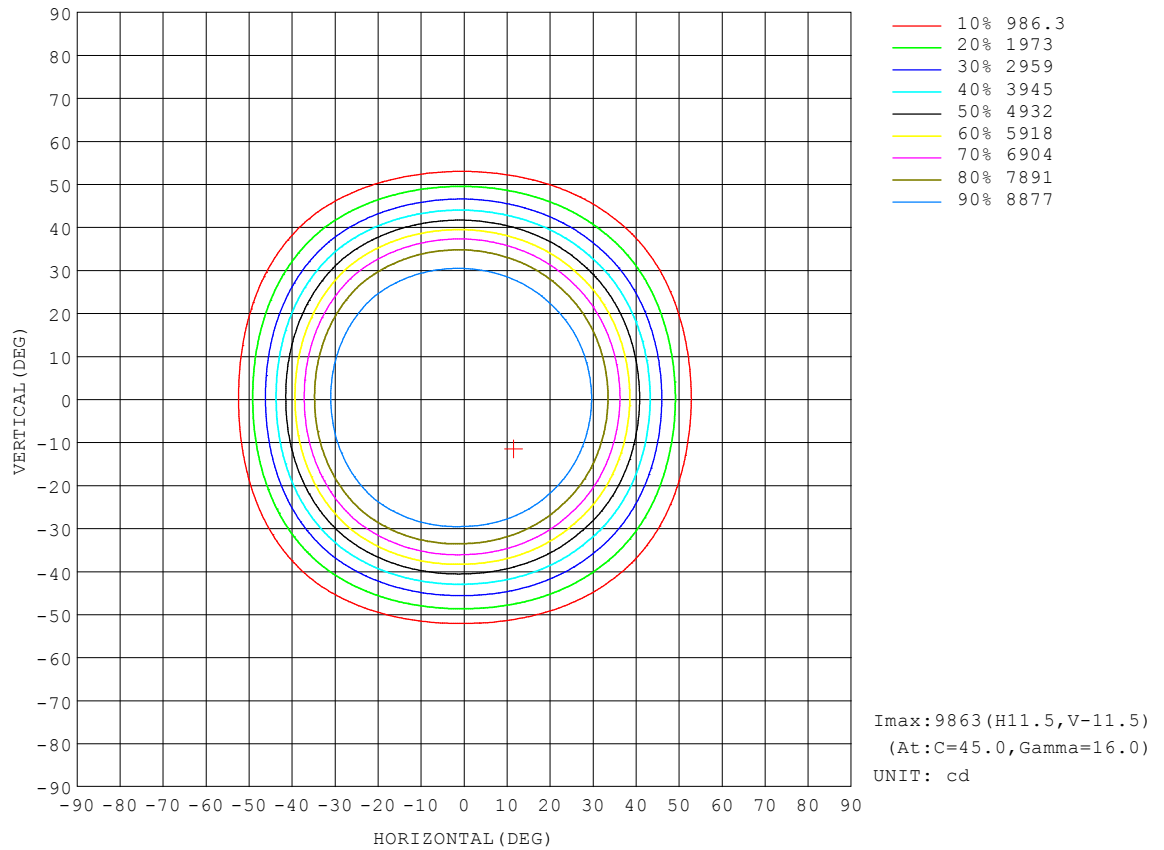
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	70	65	76	69	65	60
0.80	87	79	75	86	79	75	85	78	74	69
1.00	93	86	82	92	86	82	91	86	81	76
1.25	99	92	88	97	92	87	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:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

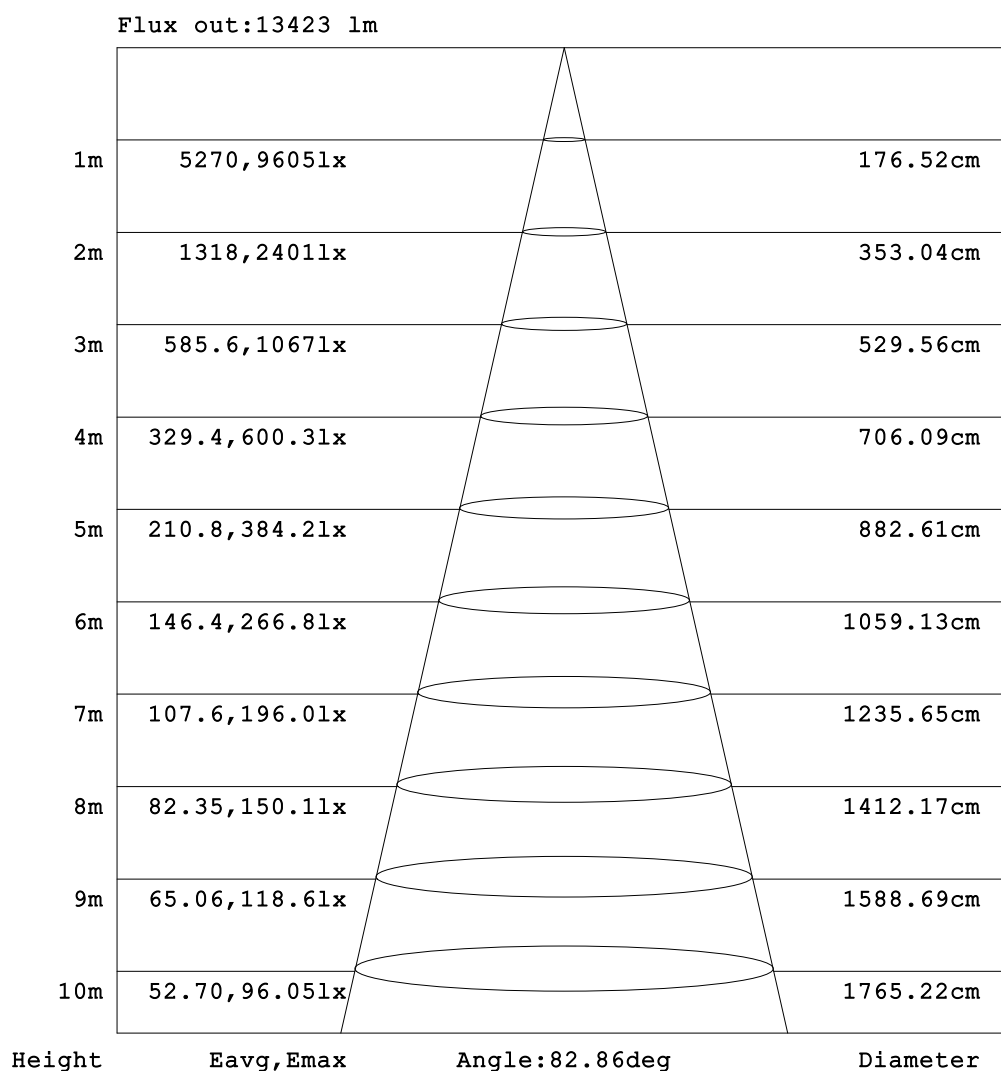


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.1DEG
Operators:Marvin Ma
Test Date:2022-09-01

☐ 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:120.6V I:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

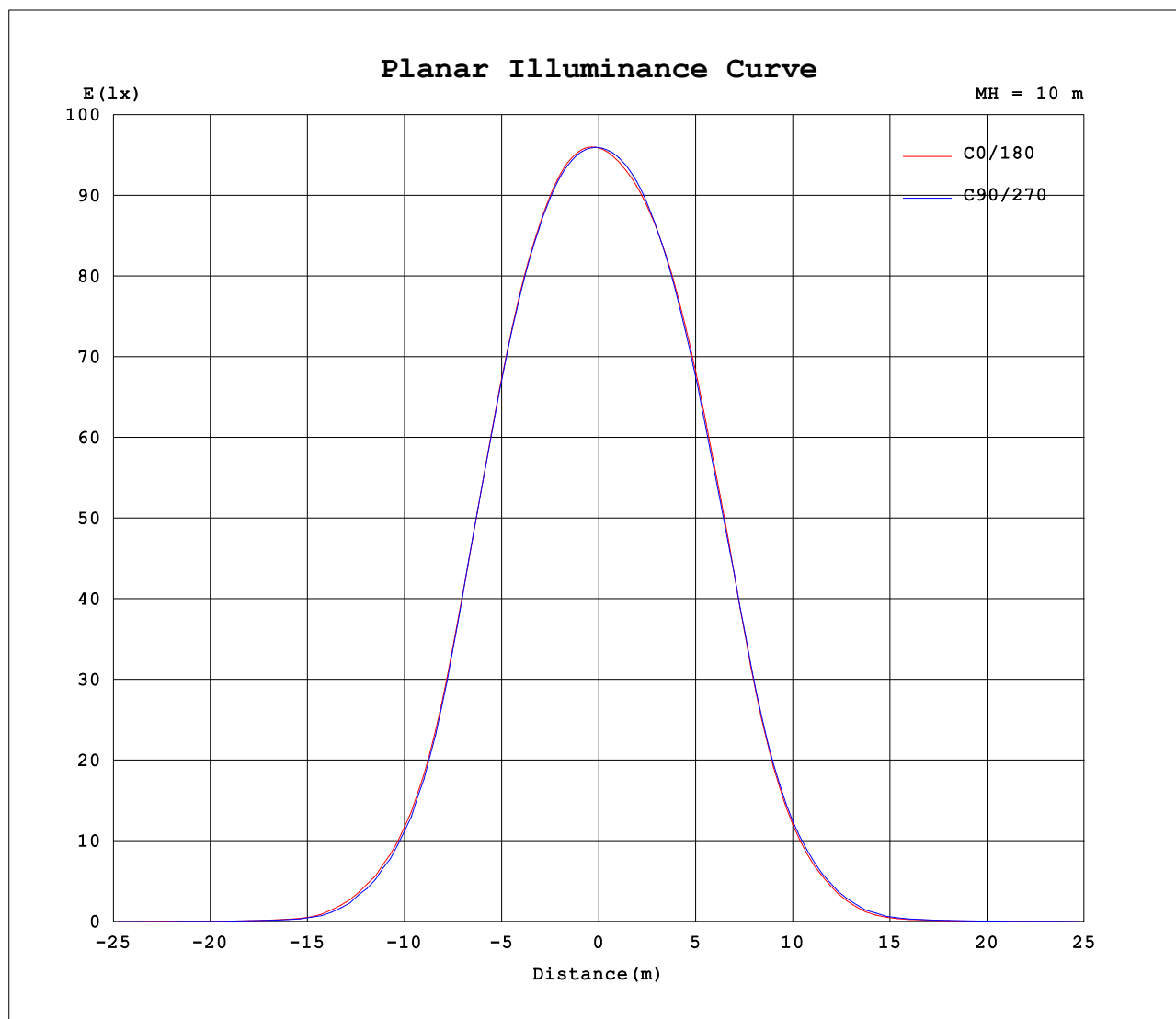


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:120.6V I:0.8383A P:100.8W PF:0.9974 Freq:59.97Hz Lamp Flux:16144.4x1 lm		
NAME: H17-RAL-100W-5K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC	SUR.:0.23	Shielding Angle:

Table--1

UNIT: cd

C (DEG) □ (DEG)	0	45	90	135	180	225	270	315										
0	9590	9592	9594	9598	9590	9592	9594	9598										
5	9679	9680	9651	9602	9564	9564	9612	9664										
10	9787	9791	9752	9680	9623	9620	9686	9762										
15	9859	9857	9827	9766	9730	9721	9756	9824										
20	9836	9827	9806	9798	9791	9778	9759	9793										
25	9573	9547	9550	9640	9651	9646	9565	9526										
30	8808	8711	8788	9032	9066	9111	8951	8795										
35	7405	7195	7364	7756	7801	8036	7819	7493										
40	5295	4988	5170	5562	5591	5911	5673	5266										
45	3333	3103	3187	3373	3410	3634	3525	3237										
50	1768	1525	1564	1702	1701	1858	1816	1667										
55	494	368	389	475	435	543	562	486										
60	141	118	120	132	127	157	169	151										
65	61.6	53.1	54.8	58.4	58.2	69.8	79.1	73.1										
70	36.3	32.0	32.9	35.1	34.7	42.0	47.9	43.9										
75	21.3	19.4	19.7	20.7	20.1	24.2	27.6	25.4										
80	12.2	11.5	11.3	11.5	10.8	12.9	14.5	13.6										
85	6.22	5.69	5.41	5.51	4.55	5.35	5.96	5.85										
90	2.37	2.50	2.44	2.41	2.20	2.00	1.97	2.10										
95	3.55	3.71	3.69	3.53	3.26	2.96	2.98	3.17										
100	5.43	5.63	5.64	5.25	4.93	4.54	4.64	4.88										
105	8.14	8.41	8.40	7.81	7.47	6.83	7.11	7.37										
110	11.8	12.0	12.1	11.2	10.9	9.97	10.5	10.7										
115	16.3	16.3	16.6	15.3	15.1	13.9	14.8	14.9										
120	21.4	21.2	21.7	20.1	20.0	18.5	19.8	19.6										
125	27.0	26.4	27.4	25.2	25.8	23.6	25.4	24.8										
130	32.7	31.5	33.1	30.3	31.5	28.8	31.2	30.1										
135	38.3	36.6	38.7	35.5	37.4	34.1	37.2	35.3										
140	42.9	41.8	43.1	40.6	42.3	39.2	42.5	40.5										
145	46.8	47.4	47.4	46.5	46.8	45.2	47.1	46.7										
150	51.0	52.1	51.7	51.4	51.4	50.9	51.4	52.1										
155	55.6	56.7	56.5	55.9	56.2	55.7	56.3	57.3										
160	61.1	62.0	62.2	61.1	61.7	61.2	61.8	62.7										
165	67.2	67.4	68.1	66.6	67.7	66.7	67.7	68.3										
170	72.7	72.3	73.2	71.7	72.9	71.9	73.0	73.2										
175	76.9	76.1	77.3	75.8	76.8	75.9	77.1	76.9										
180	79.7	78.6	79.6	78.8	79.7	78.6	79.6	78.9										

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: