

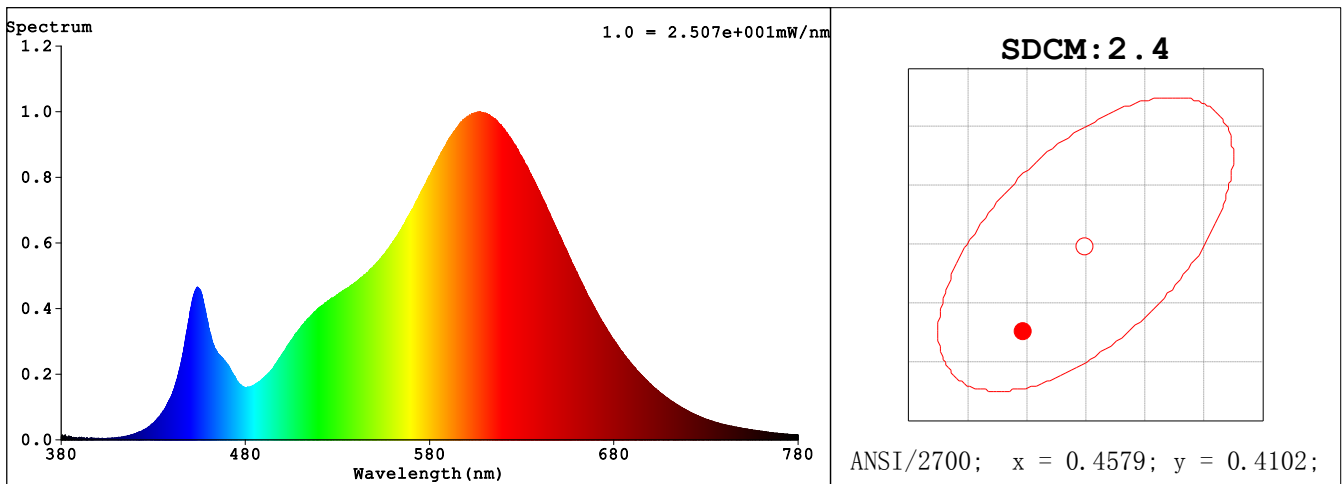
Spectrum Test Report

Sample	:	Date	:	2019-12-06
Specification	:	Sam. Status	:	
Sample No.	:	Standard	:	
Manufacturer	:	Instrument	:	HaasSuite(EVERFINE)
Assessor	:	Test by	:	DAMIN
Remark	:			
Device SN	:			

Test Condition

Temperature	:	24.8Deg	RH	:	65.0%
WL Range	:	380nm-780nm	IP	:	52880 (81%)
Test Mode	:	Fast Test	T	:	155 ms
Sensitivity	:	High			

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4544$ $y = 0.4048$ / $u' = 0.2616$ $v' = 0.5243$ ($duv = -1.69e-03$)
 CCT= 2732K Prcp WL: Ld=584.6nm Purity=57.9%
 Peak WL: Lp=608nm FWHM: =116.5nm Ratio:R=25.2% G=72.5% B=2.3%
 Render Index: Ra = 83.7

EEL: 0.16955 A+

R1 =83 R2 =93 R3 =95 R4 =81 R5 =83 R6 =93 R7 =82
 R8 =59 R9 =13 R10=85 R11=82 R12=77 R13=86 R14=98 R15=75
 LEVEL:OUT WHITE:ANSI_2700K

Photometric & Radiometric Parameters

Flux = 1164.9 lm Eff. : 78.87 lm/W Fe = 3.6457 W Scotopic:1459.7 S/P:1.253

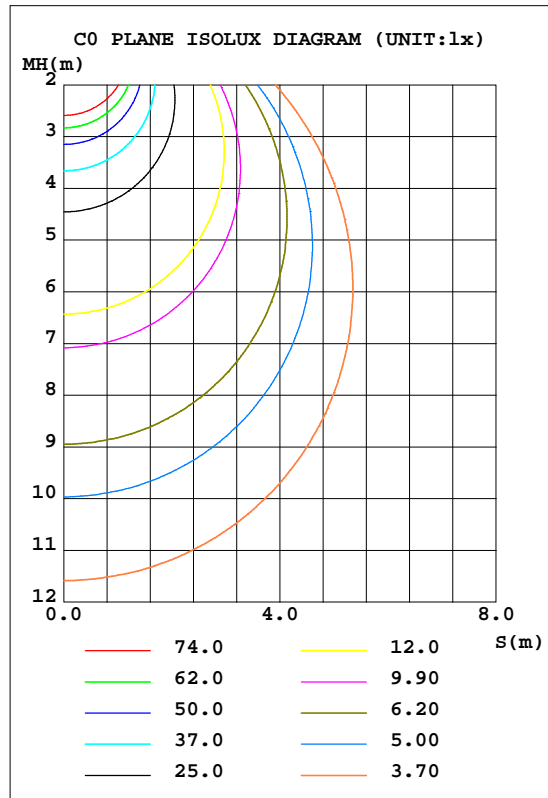
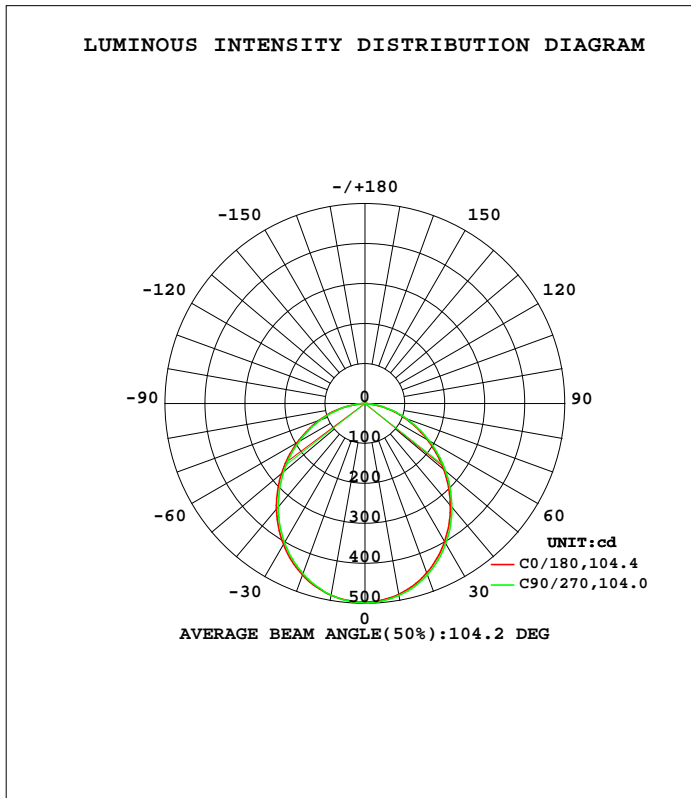
Electrical parameters

V = 120.08 V I = 0.1384 A P = 14.77 W PF = 0.8888 F=59.98 Hz

LUMINAIRE PHOTOMETRIC TEST REPORT

NAME:	TYPE:SM7R15827120W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	498.6	S/MH(C0/180)	1.23
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.21
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1293.8	h UP, DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	1293.83	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	h down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-12-06

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:3.200m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

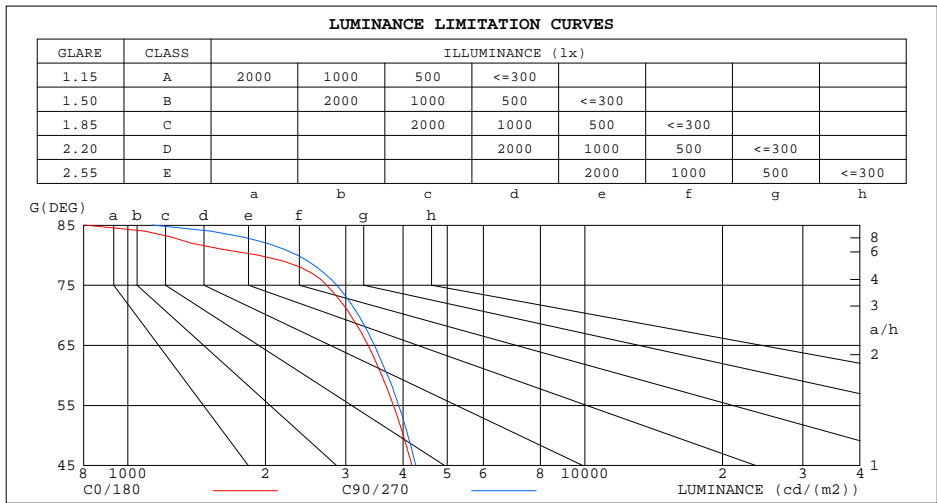
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	485.0	487.8	487.3	486.7					0- 10	46.97	46.97	3.63,3.63
20	451.1	456.2	456.8	453.0					10- 20	133.4	180.3	13.9,13.9
30	399.0	404.4	407.5	402.6					20- 30	198.4	378.7	29.3,29.3
40	332.3	338.2	344.8	337.8					30- 40	232.7	611.4	47.3,47.3
50	257.5	263.6	272.4	265.4					40- 50	233.1	844.5	65.3,65.3
60	179.8	185.2	196.4	190.0					50- 60	202.4	1047	80.9,80.9
70	105.1	109.4	121.1	116.3					60- 70	148.3	1195	92.4,92.4
80	33.47	40.85	51.32	47.35					70- 80	82.22	1277	98.7,98.7
90	0.3880	0.3715	0.0696	0.0644					80- 90	16.37	1294	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:cd									UNIT:lm		

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 Interval: 1.0DEG
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 Humidity:65.0%
 Test Distance:3.200m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME:	TYPE:SM7R15827120W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	804	1133
80	1927	2352
75	2723	2865
70	3074	3197
65	3355	3465
60	3597	3703
55	3813	3916
50	4006	4100
45	4186	4269

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 Humidity:65.0%
 Test Distance:3.200m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME:	TYPE:SM7R15827120W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.296	.168	.053	.289	.165	.052	.276	.158	.051	.264	.152	.049	.253	.146	.047	
2.0	.282	.154	.047	.276	.152	.047	.264	.147	.046	.253	.142	.044	.243	.138	.043	
3.0	.262	.140	.042	.257	.137	.041	.246	.134	.041	.237	.130	.040	.228	.126	.039	
4.0	.243	.126	.037	.238	.125	.037	.229	.121	.036	.221	.118	.036	.213	.116	.035	
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.205	.108	.032	.198	.106	.032	
6.0	.209	.105	.030	.206	.104	.030	.198	.102	.030	.192	.100	.029	.185	.098	.029	
7.0	.195	.097	.027	.192	.096	.027	.185	.094	.027	.179	.092	.027	.174	.090	.027	
8.0	.183	.089	.025	.180	.088	.025	.174	.087	.025	.168	.085	.025	.163	.084	.024	
9.0	.171	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.154	.078	.023	
10.0	.161	.077	.021	.159	.077	.021	.154	.076	.021	.150	.074	.021	.146	.073	.021	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	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	.179	.156	.135	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.024	.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	.026	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
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 Operators:DAMIN
 Test Date:2019-12-06

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:3.200m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

NAME:		TYPE:SM7R15827120W					WEIGHT:				
SPEC.:		DIM.:					SERIAL No.:				
MFR.: RAB LIGHTING INC.		SUR.:21cm*16cm					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	2H	16.4	17.9	16.7	18.1	18.3	16.5	18.0	16.8	18.2	18.4
	3H	17.7	19.1	18.0	19.3	19.6	17.9	19.2	18.2	19.5	19.7
	4H	18.2	19.5	18.5	19.8	20.0	18.4	19.7	18.7	19.9	20.2
	6H	18.5	19.7	18.8	20.0	20.3	18.7	19.9	19.0	20.2	20.5
	8H	18.5	19.7	18.8	20.0	20.3	18.8	20.0	19.1	20.2	20.5
	12H	18.5	19.6	18.8	19.9	20.2	18.8	19.9	19.1	20.2	20.5
	4H 2H	17.0	18.3	17.3	18.5	18.8	17.1	18.4	17.4	18.6	18.9
	3H	18.5	19.6	18.8	19.9	20.2	18.6	19.7	18.9	20.0	20.3
	4H	19.1	20.1	19.5	20.4	20.8	19.2	20.3	19.6	20.6	20.9
	6H	19.4	20.4	19.8	20.7	21.1	19.6	20.6	20.0	20.9	21.3
	8H	19.5	20.3	19.9	20.7	21.1	19.7	20.6	20.2	21.0	21.4
	12H	19.5	20.3	19.9	20.7	21.1	19.8	20.6	20.2	20.9	21.3
	8H 4H	19.3	20.2	19.7	20.5	20.9	19.4	20.3	19.8	20.6	21.0
	6H	19.8	20.5	20.2	20.9	21.3	20.0	20.7	20.4	21.1	21.5
	8H	19.8	20.5	20.3	20.9	21.3	20.1	20.7	20.6	21.2	21.6
	12H	19.9	20.4	20.3	20.9	21.3	20.2	20.7	20.6	21.1	21.6
	12H 4H	19.3	20.1	19.7	20.5	20.9	19.4	20.2	19.8	20.6	21.0
	6H	19.8	20.4	20.2	20.8	21.3	20.0	20.6	20.4	21.0	21.5
	8H	19.9	20.4	20.4	20.9	21.3	20.1	20.7	20.6	21.1	21.6
Variations with the observer position at spacings:											
S = 1.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.3 / - 0.3					+ 0.3 / - 0.3				

CIE Pub.117, 1294 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.9)

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 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:3.200m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

NAME:	TYPE:SM7R15827120W	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

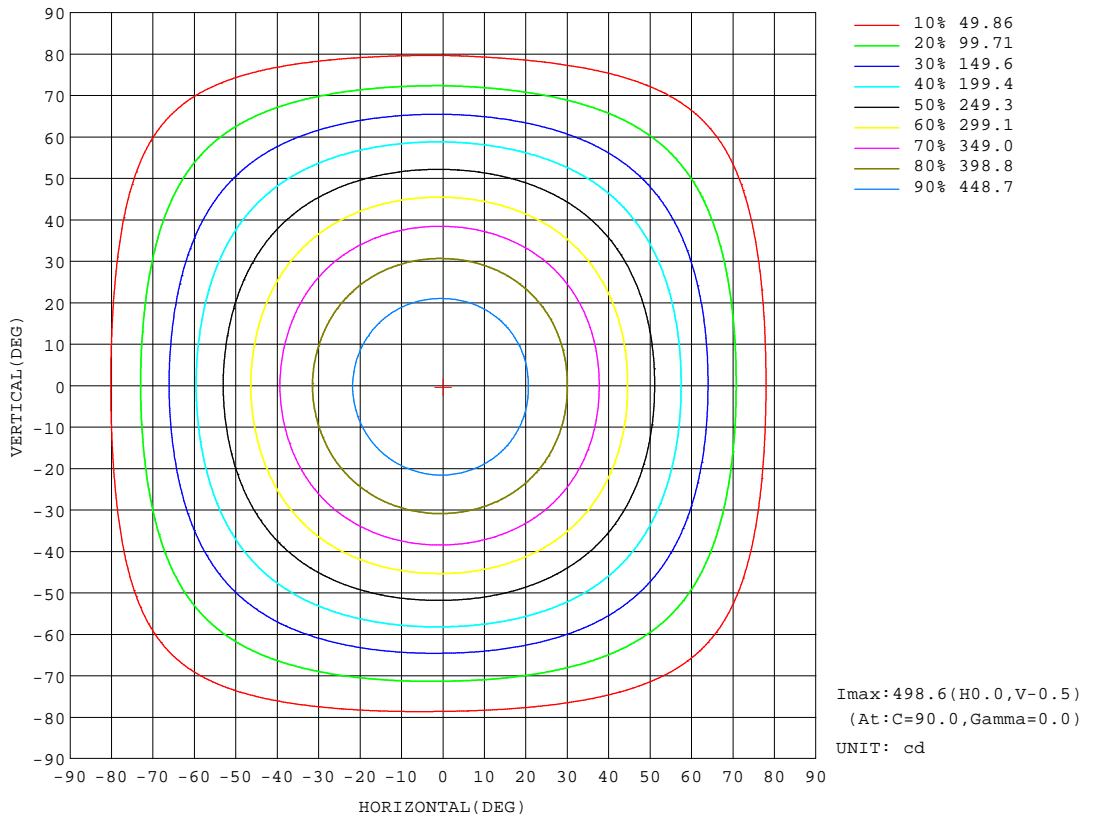
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	48	41	58	47	41	57	47	41	34
0.80	69	58	51	68	57	50	66	57	50	43
1.00	77	67	60	76	66	59	74	67	59	52
1.25	84	74	67	83	74	67	80	72	66	59
1.50	89	80	73	88	79	73	85	77	71	64
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	92	87	98	91	86	94	88	84	76
3.00	103	96	91	101	95	90	97	92	88	80
4.00	107	101	97	105	100	96	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

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ISOCANDELA DIAGRAM

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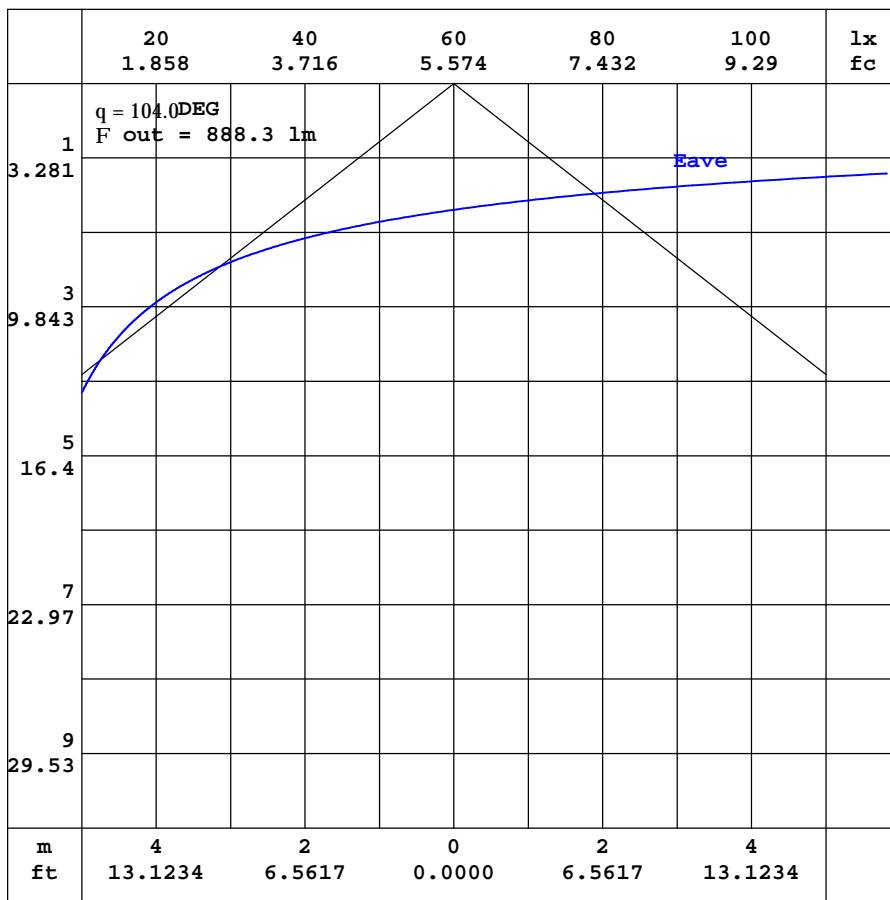


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Remarks:

AAI CURVES

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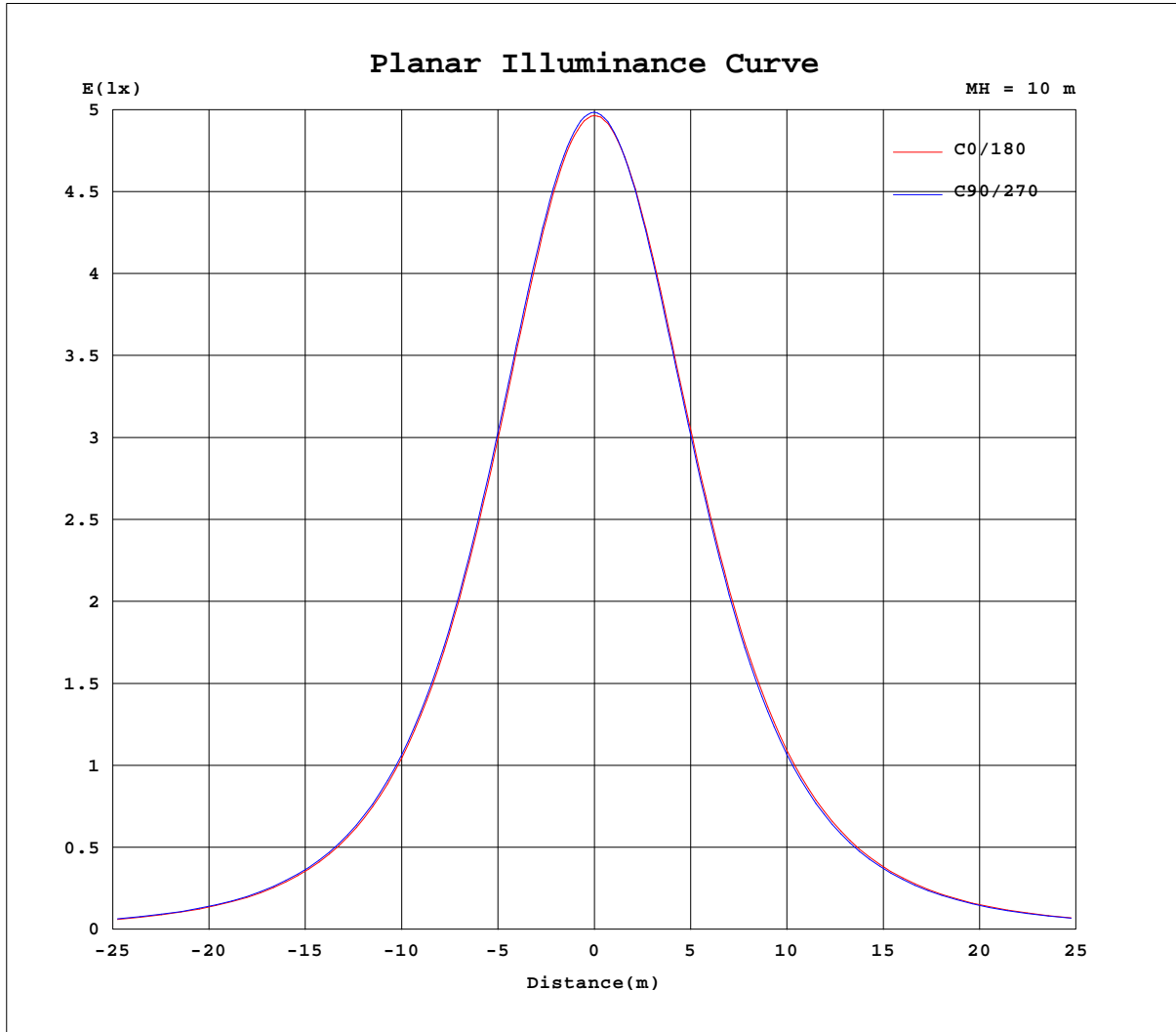


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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Planar Illuminance Curve



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 Remarks:

