

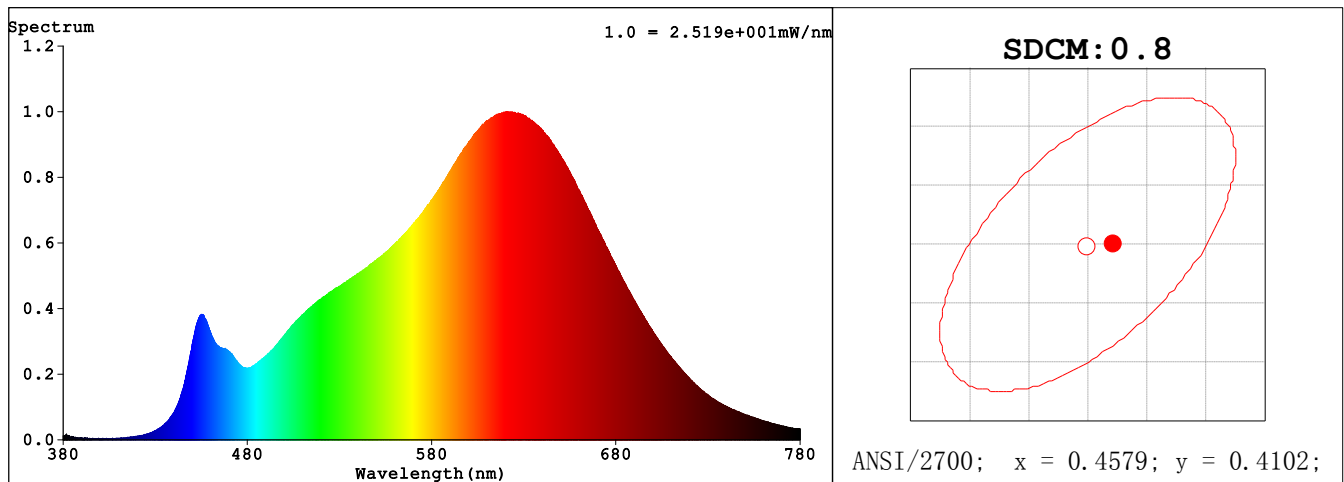
## Spectrum Test Report

Sample	:		Date	:	2019-11-26
Specification	:	SM7R15927UNVTW	Sam. Status	:	
Sample No.	:	1	Standard	:	
Manufacturer	:	RAB LIGHTING INC.	Instrument	:	HaasSuite(EVERFINE)
Assessor	:	damin			
Remark	:	---	Test by	:	DAMIN
Device SN	:	9#			

### Test Condition

Temperature	:	24.5Deg	RH	:	65.0%
WL Range	:	380nm-780nm	IP	:	53391 (81%)
Test Mode	:	Fast Test	T	:	156 ms
Sensitivity	:	High			

### Spectrum



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4594$   $y = 0.4104$  /  $u' = 0.2623$   $v' = 0.5272$  ( $duv = -4.17e-05$ )  
 CCT= 2705K Prcp WL:  $L_d = 584.2nm$  Purity=61.1%  
 Peak WL:  $L_p = 621nm$  FWHM: =144.4nm Ratio:R=26.6% G=70.7% B=2.7%  
 Render Index:  $R_a = 93.5$

EEL: 0.16380 A+

R1 =95 R2 =99 R3 =97 R4 =94 R5 =95 R6 =97 R7 =90  
 R8 =81 R9 =61 R10=97 R11=96 R12=85 R13=96 R14=100 R15=90  
 LEVEL:OUT WHITE:ANSI\_2700K

### Photometric & Radiometric Parameters

Flux = 1174.0 lm Eff. : 81.75 lm/W  $F_e = 4.1625 W$  Scotopic:1546.1 S/P:1.3169

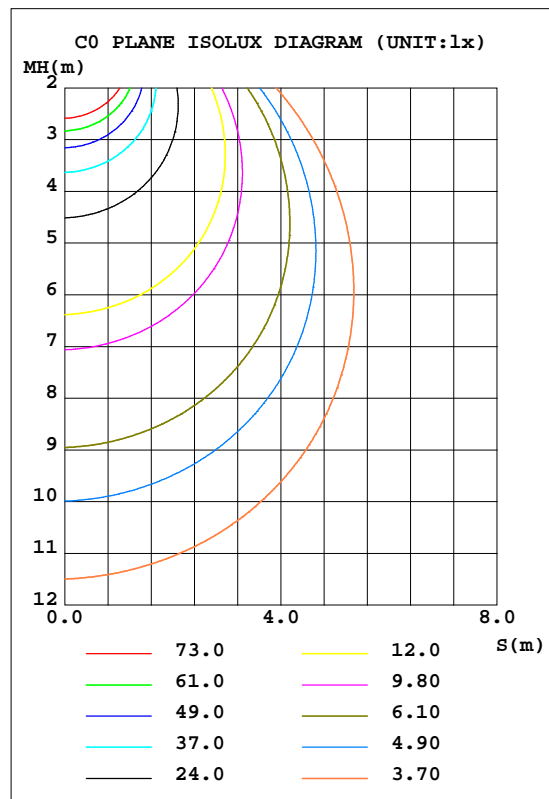
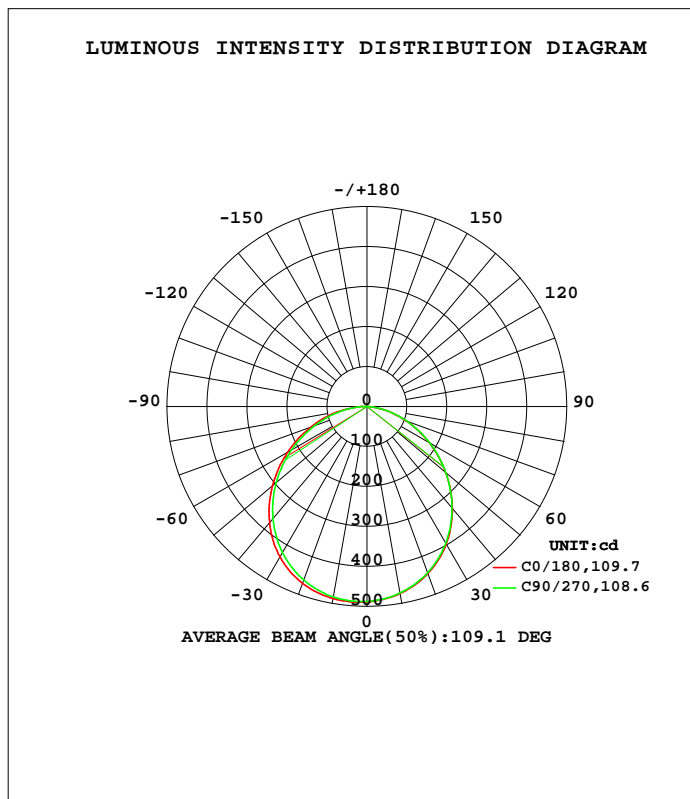
### Electrical parameters

V = 120.07 V I = 0.1205 A P = 14.36 W PF = 0.9929 F=59.98 Hz

LUMINAIRE PHOTOMETRIC TEST REPORT

NAME:	TYPE:SM7R15927UNVTW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	490.1	S/MH(C0/180)	1.32
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1355.7	h UP, DN(C0-180)	0.0,46.0
NOMINAL FLUX(lm)	1355.66	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.0,54.0
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:2019-11-23

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:

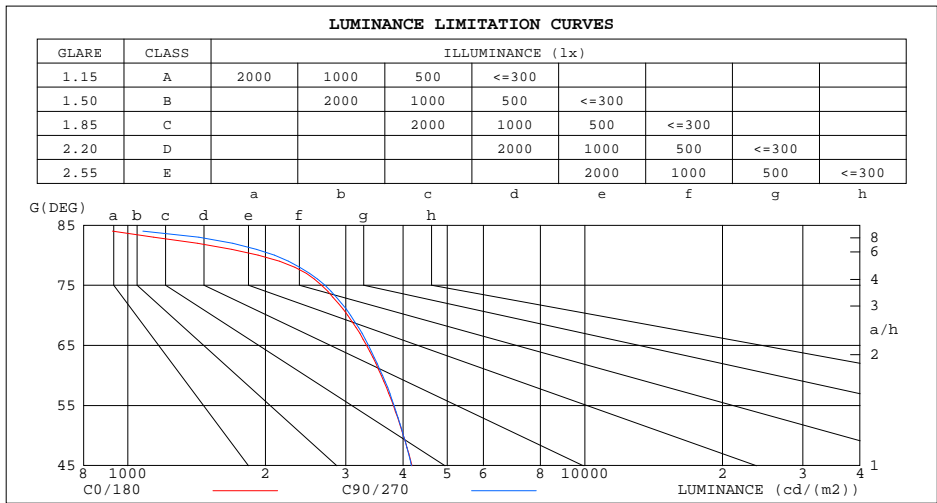
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	475.2	473.9	487.8	483.7					0- 10	46.21	46.21	3.41,3.41
20	445.1	442.9	470.8	462.2					10- 20	132.6	178.8	13.2,13.2
30	397.0	394.4	435.0	422.4					20- 30	200.8	379.7	28,28
40	332.5	330.9	379.4	366.0					30- 40	240.1	619.8	45.7,45.7
50	257.6	257.8	308.6	296.7					40- 50	244.7	864.5	63.8,63.8
60	179.4	180.5	229.5	218.2					50- 60	215.8	1080	79.7,79.7
70	103.6	105.2	148.7	138.3					60- 70	160.9	1241	91.6,91.6
80	33.46	36.35	70.60	62.67					70- 80	91.96	1333	98.3,98.3
90	0.5215	0.4878	6.931	3.955					80- 90	22.55	1356	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		

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-11-23

g 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:

LUMINANCE LIMITATION CURVES

NAME:	TYPE:SM7R15927UNVTW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-11-23

G Range: 0 - 90DEG  
 G Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:3.200m [K=1.0000]  
 Remarks:

WEC AND CCEC

NAME:	TYPE:SM7R15927UNVTW	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	.305	.173	.055	.298	.170	.054	.284	.163	.052	.272	.157	.050	.261	.151	.049	
2.0	.288	.158	.048	.282	.155	.048	.270	.150	.047	.259	.145	.046	.249	.141	.044	
3.0	.267	.142	.043	.261	.140	.042	.251	.136	.041	.242	.132	.041	.233	.129	.040	
4.0	.247	.128	.038	.242	.127	.037	.233	.123	.037	.224	.120	.036	.216	.118	.036	
5.0	.228	.116	.034	.224	.115	.033	.216	.112	.033	.208	.110	.033	.201	.108	.032	
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.197	.098	.028	.194	.097	.028	.188	.095	.027	.182	.093	.027	.176	.091	.027	
8.0	.185	.090	.025	.181	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.141	.099	.065	.096	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.077	.042	.018	.045	.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: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-11-23

g Range: 0 - 90DEG  
 g 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:SM7R15927UNVTW					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	16.1	17.6	16.3	17.8	18.0	16.1	17.6	16.3	17.8	18.0
	3H	17.3	18.7	17.6	19.0	19.2	17.4	18.8	17.7	19.0	19.2
	4H	17.8	19.1	18.1	19.4	19.6	17.9	19.2	18.2	19.4	19.7
	6H	18.1	19.3	18.4	19.6	19.9	18.1	19.4	18.5	19.7	19.9
	8H	18.1	19.3	18.4	19.6	19.9	18.2	19.4	18.5	19.7	20.0
	12H	18.1	19.2	18.4	19.5	19.8	18.1	19.3	18.5	19.6	19.9
4H	2H	16.6	17.9	16.9	18.2	18.4	16.6	17.9	16.9	18.2	18.4
	3H	18.1	19.2	18.4	19.5	19.8	18.1	19.2	18.4	19.5	19.8
	4H	18.6	19.7	19.0	20.0	20.4	18.7	19.7	19.1	20.1	20.4
	6H	19.0	19.9	19.4	20.3	20.7	19.1	20.0	19.5	20.3	20.7
	8H	19.0	19.9	19.4	20.3	20.7	19.1	20.0	19.5	20.4	20.8
	12H	19.0	19.8	19.4	20.2	20.6	19.1	19.9	19.5	20.3	20.7
8H	4H	18.8	19.7	19.3	20.1	20.5	18.9	19.7	19.3	20.1	20.5
	6H	19.3	20.0	19.7	20.4	20.8	19.3	20.1	19.8	20.5	20.9
	8H	19.4	20.0	19.8	20.4	20.9	19.5	20.1	19.9	20.5	21.0
	12H	19.4	19.9	19.9	20.4	20.9	19.5	20.0	20.0	20.5	21.0
12H	4H	18.8	19.6	19.3	20.0	20.4	18.9	19.7	19.3	20.1	20.5
	6H	19.3	19.9	19.8	20.4	20.8	19.4	20.0	19.8	20.4	20.9
	8H	19.4	20.0	19.9	20.4	20.9	19.5	20.0	20.0	20.5	21.0
Variations with the observer position at spacings:											
S = 1.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.3 / - 0.3					+ 0.3 / - 0.3				

CIE Pub.117, 1356 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.1)

C Range: 0 - 360DEG  
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 Temperature:25.3DEG  
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 Test Date:2019-11-23

g 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:

UTILIZATION FACTORS TABLE

NAME:	TYPE:SM7R15927UNVTW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

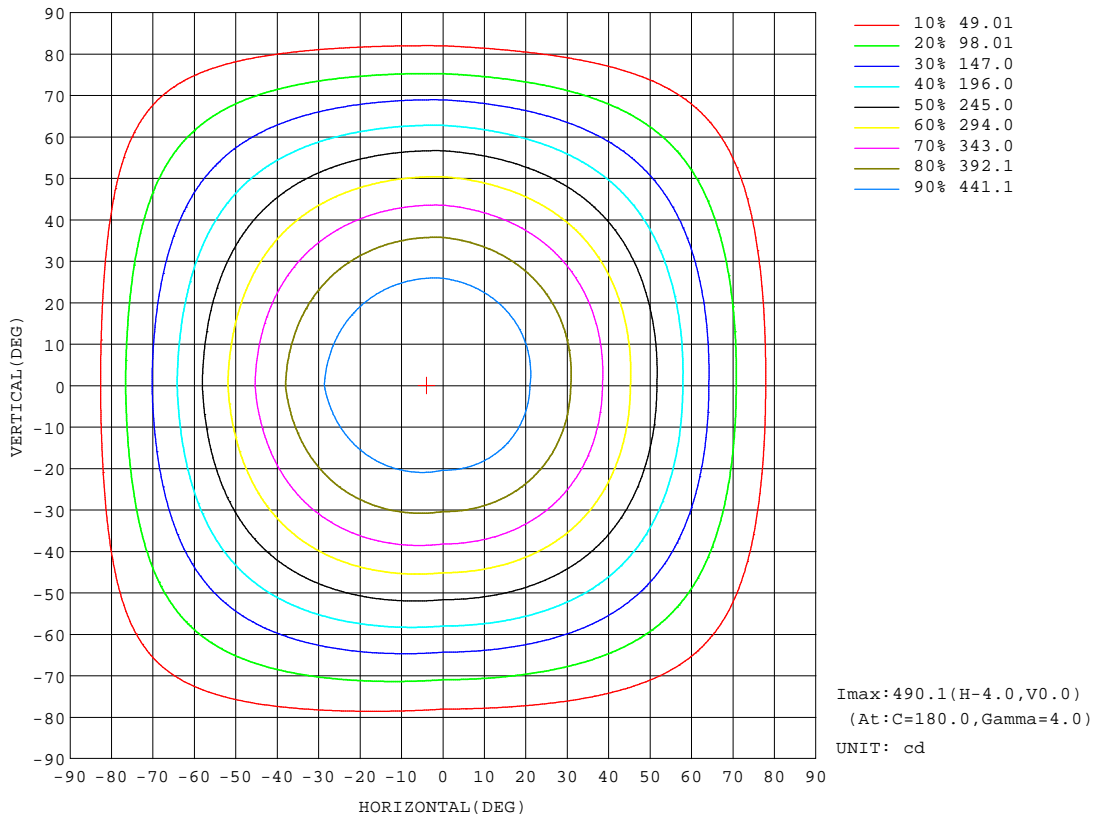
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	47	40	57	46	40	56	46	39	33
0.80	68	57	49	67	56	49	65	55	49	42
1.00	77	66	58	75	65	58	73	66	58	51
1.25	84	73	66	82	73	66	80	71	65	58
1.50	89	79	72	87	78	71	84	76	70	63
2.00	95	87	81	94	86	80	90	84	78	71
2.50	99	92	86	97	90	85	93	88	83	75
3.00	103	96	90	100	94	89	96	91	87	79
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	99	102	99	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

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 Test Date:2019-11-23

g 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:

**ISOCANDELA DIAGRAM**

<b>NAME:</b>	<b>TYPE:SM7R15927UNVTW</b>	<b>WEIGHT:</b>
<b>SPEC.:</b>	<b>DIM.:</b>	<b>SERIAL No.:</b>
<b>MFR.: RAB LIGHTING INC.</b>	<b>SUR.:21cm*16cm</b>	<b>Shielding Angle:</b>



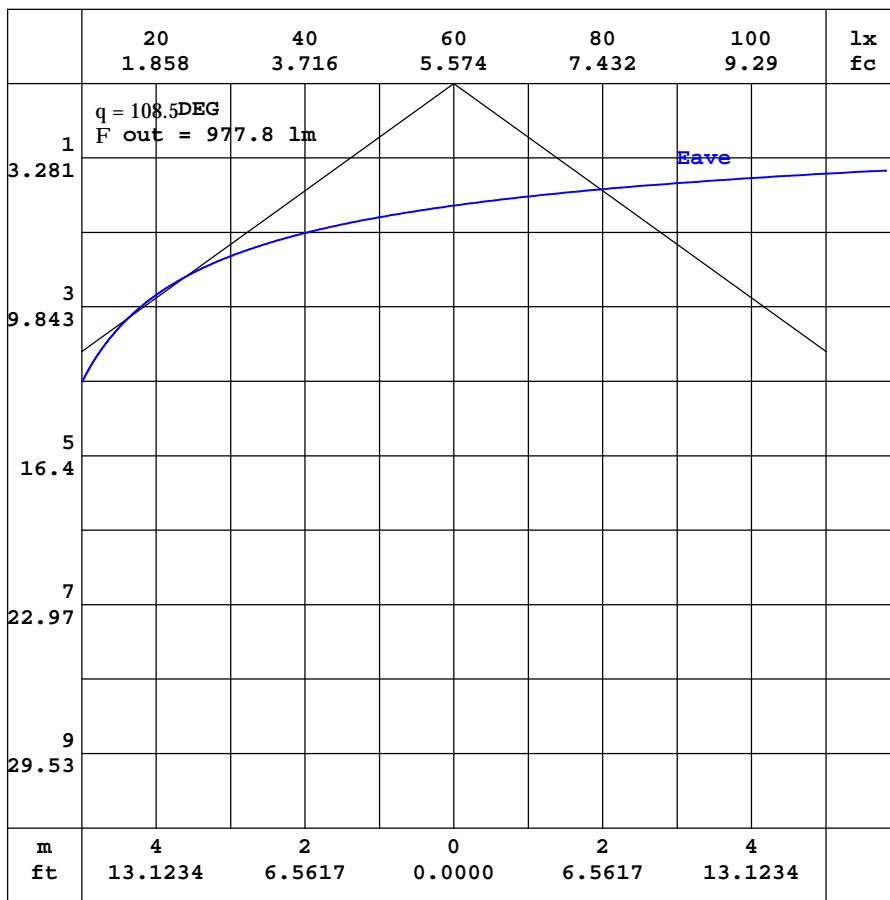
**C Range: 0 - 360DEG**  
**C Interval: 90.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:DAMIN**  
**Test Date:2019-11-23**

**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:**



AAI CURVES

NAME:	TYPE:SM7R15927UNVTW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

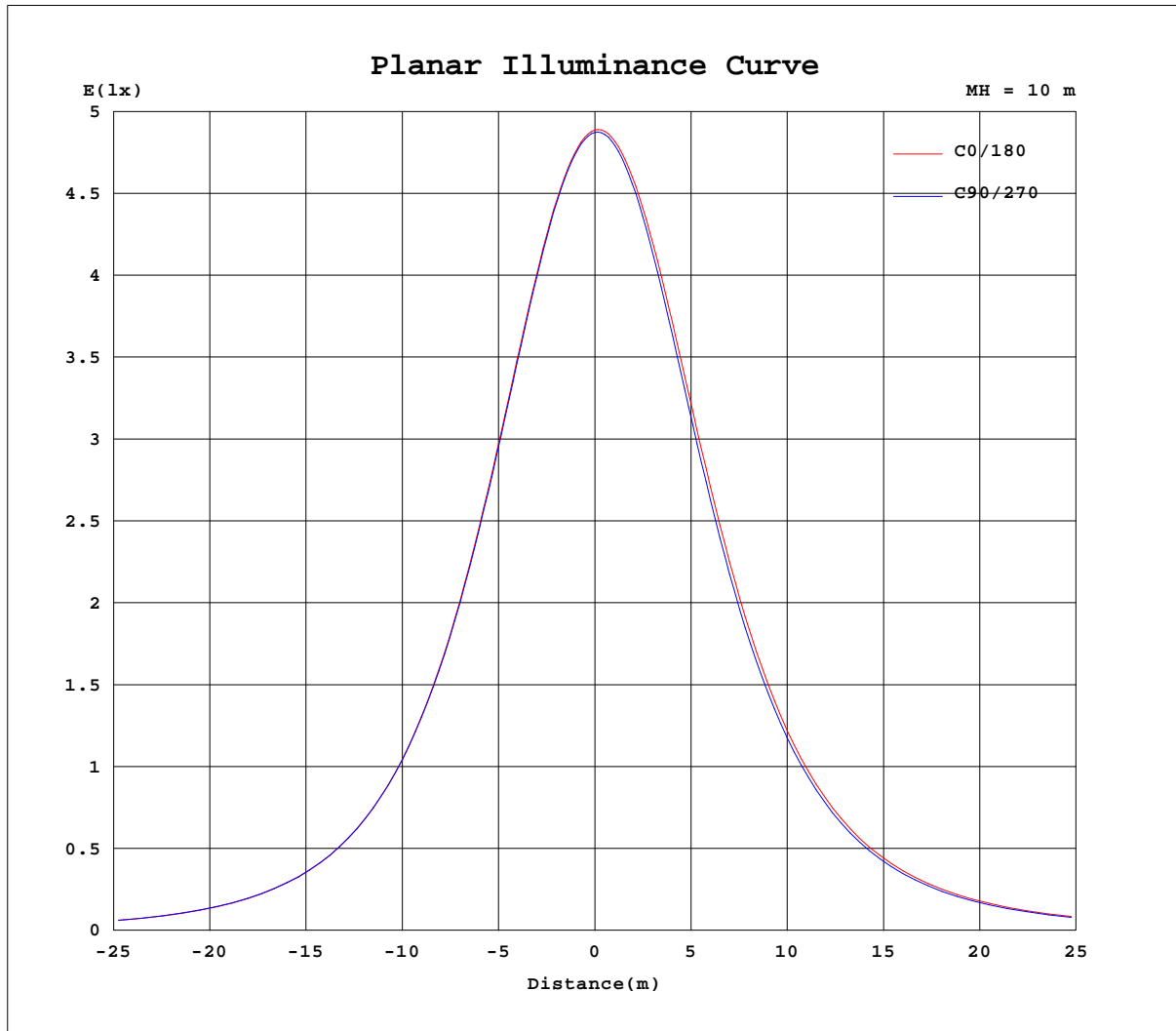


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
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 Remarks:

Planar Illuminance Curve



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 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2019-11-23

Page 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:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME:	TYPE:SM7R15927UNVTW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	489	487	489	487															
5	484	483	490	488															
10	475	474	488	484															
15	462	461	481	475															
20	445	443	471	462															
25	423	421	456	445															
30	397	394	435	422															
35	366	364	410	396															
40	333	331	379	366															
45	296	295	346	333															
50	258	258	309	297															
55	219	219	270	258															
60	179	180	229	218															
65	141	142	189	178															
70	104	105	149	138															
75	68.7	69.9	110	99.6															
80	33.5	36.3	70.6	62.7															
85	5.54	5.46	30.2	26.9															
90	0.52	0.49	6.93	3.95															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
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g 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: