

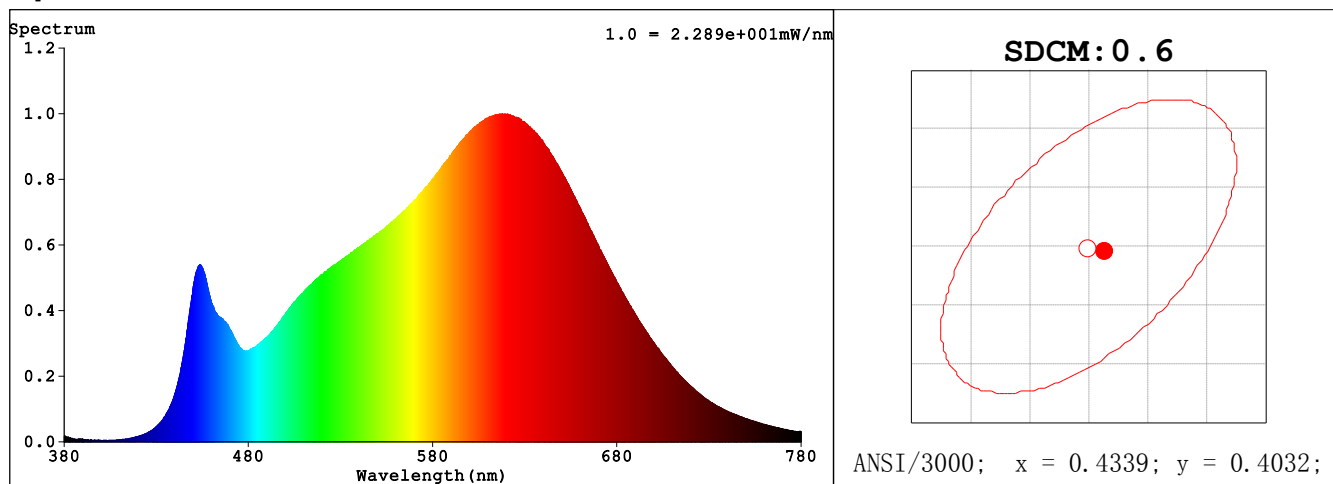
Spectrum Test Report

Sample	:		Date	:	2019-12-05
Specification	:	SM7R15930UNVW	Sam. Status	:	
Sample No.	:	120 1	Standard	:	
Manufacturer	:	RAB LIGHTING INC.	Instrument	:	HaasSuite(EVERFINE)
Assessor	:	damin			
Remark	:	---	Test by	:	DAMIN
Device SN	:	9#			

Test Condition

Temperature	:	24.4Deg	RH	:	65.0%
WL Range	:	380nm-780nm	IP	:	54927 (84%)
Test Mode	:	Fast Test	T	:	176 ms
Sensitivity	:	High			

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4348$ $y = 0.4030$ / $u' = 0.2497$ $v' = 0.5207$ ($duv = -1.21e-04$)

CCT= 3027K Prcp WL: $L_d = 582.8nm$ Purity=51.5%

Peak WL: $L_p = 618nm$ FWHM: $= 161.2nm$ Ratio: R=24.2% G=72.7% B=3.2%

Render Index: $R_a = 93.0$

EEL: 0.16249 A+

R1 =94 R2 =98 R3 =98 R4 =92 R5 =93 R6 =97 R7 =91
R8 =81 R9 =58 R10=94 R11=94 R12=81 R13=95 R14=100 R15=89
LEVEL:OUT WHITE:ANSI_3000K

Photometric & Radiometric Parameters

Flux = 1178.1 lm Eff. : 82.46 lm/W $F_e = 4.0343 W$ Scotopic: 1712.6 S/P: 1.4537

Electrical parameters

V = 120.09 V I = 0.1201 A P = 14.29 W PF = 0.9907 F=59.98 Hz

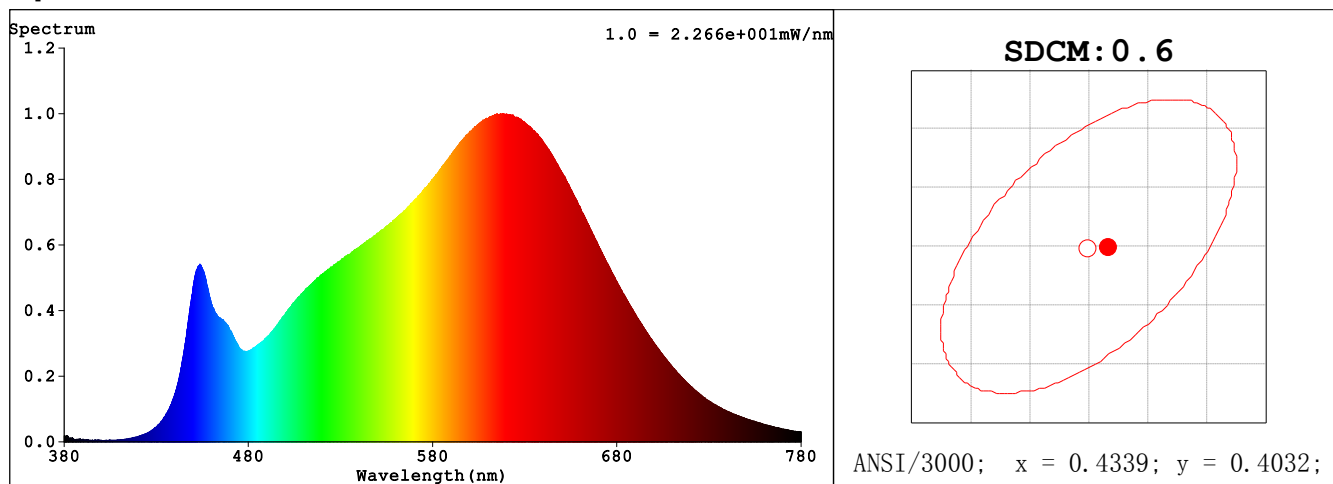
Spectrum Test Report

Sample	:		Date	:	2019-12-05
Specification	:	SM7R15930UNVW	Sam. Status	:	
Sample No.	:	277 1	Standard	:	
Manufacturer	:	RAB LIGHTING INC.	Instrument	:	HaasSuite(EVERFINE)
Assessor	:	damin			
Remark	:	---	Test by	:	DAMIN
Device SN	:	9#			

Test Condition

Temprature	:	24.5Deg	RH	:	65.0%
WL Range	:	380nm-780nm	IP	:	54392 (83%)
Test Mode	:	Fast Test	T	:	176 ms
Sensitivity	:	High			

Spectrum



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4350$ $y = 0.4033$ / $u' = 0.2497$ $v' = 0.5208$ ($duv = -5.10e-05$)
 CCT= 3026K Prcp WL: $L_d = 582.7nm$ Purity=51.6%
 Peak WL: $L_p = 617nm$ FWHM: $= 161.0nm$ Ratio: R=24.2% G=72.7% B=3.2%
 Render Index: $R_a = 93.0$

EEL: 0.15963 A+

R1 =94 R2 =98 R3 =98 R4 =92 R5 =93 R6 =97 R7 =91
 R8 =81 R9 =58 R10=94 R11=94 R12=81 R13=95 R14=100 R15=89
 LEVEL:OUT WHITE:ANSI_3000K

Photometric & Radiometric Parameters

Flux = 1160.5 lm Eff. : 83.71 lm/W Fe = 3.9728 W Scotopic:1685.4 S/P:1.4523

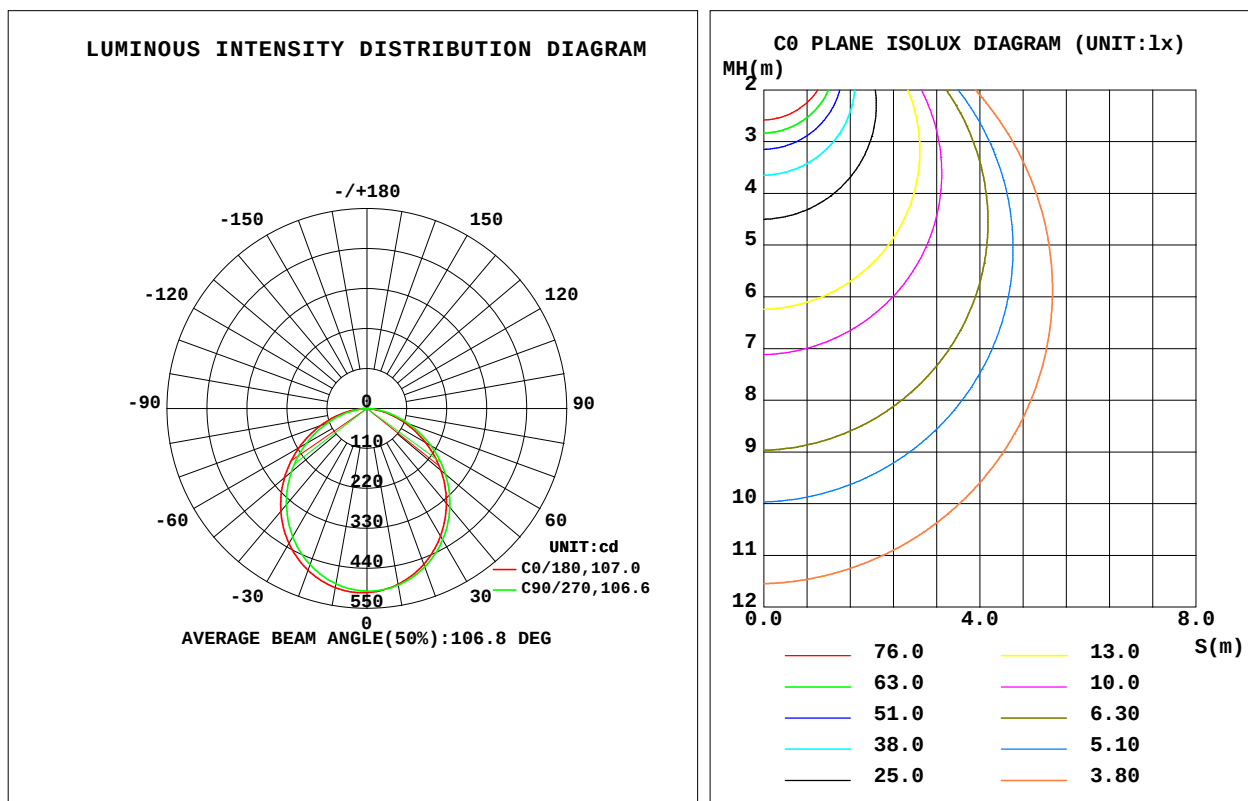
Electrical parameters

V = 277.08 V I = 0.05441 A P = 13.86 W PF = 0.9198 F=59.98 Hz

LUMINAIRE PHOTOMETRIC TEST REPORT

NAME:	TYPE:SM7R15930UNVW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 91.47 lm/W			
MODEL		I _{max} (cd)	507.1	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.21
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1345.1	h UP, DN(C0-180)	0.0,49.0
NOMINAL FLUX(lm)	1345.15	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.0,51.0
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:2019-12-07

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:3.200m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

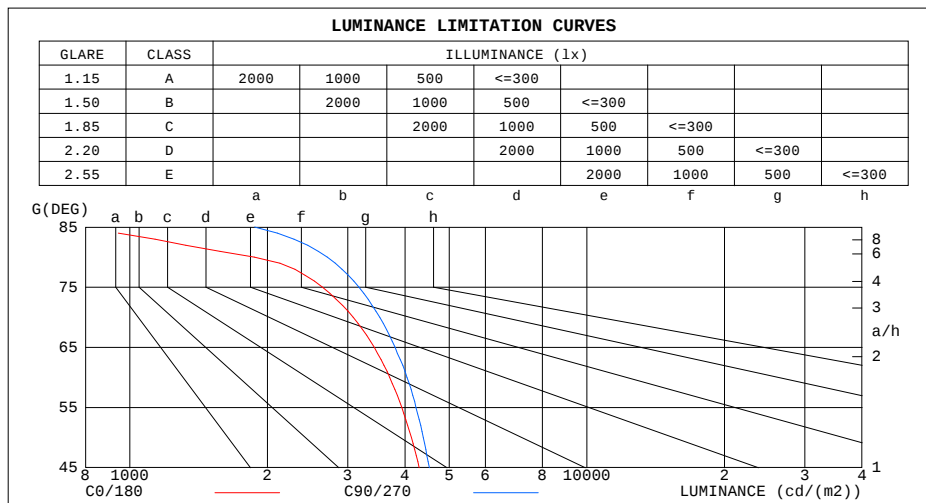
g	C0	C90	C180	C270					g	F zone	F total	%lum, lamp
10	491.3	493.4	500.7	490.0					0- 10	47.65	47.65	3.54, 3.54
20	456.7	464.0	474.0	457.8					10- 20	135.6	183.3	13.6, 13.6
30	405.3	417.1	429.2	408.4					20- 30	203.2	386.4	28.7, 28.7
40	340.3	355.1	368.8	345.3					30- 40	240.9	627.3	46.6, 46.6
50	265.6	282.1	296.6	272.0					40- 50	244.2	871.5	64.8, 64.8
60	185.3	202.2	216.6	192.7					50- 60	214.1	1086	80.7, 80.7
70	105.4	120.5	133.7	113.0					60- 70	156.7	1242	92.4, 92.4
80	32.50	46.96	57.39	41.84					70- 80	84.98	1327	98.7, 98.7
90	0.4283	0.3606	0.0557	0.0773					80- 90	17.78	1345	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:2019-12-07

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:3.200m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME:	TYPE: SM7R15930UNVW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.: 21cm*16cm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	639	1877
80	1872	2704
75	2640	3173
70	3083	3524
65	3428	3805
60	3706	4045
55	3938	4232
50	4132	4388
45	4298	4521

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-12-07

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 3.200m [K=1.0000]
Remarks:

WEC AND CCEC

NAME:	TYPE:SM7R15930UNVW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

r CC	80%			70%			50%			30%			10%			0
r W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)															
0.0																
1.0	.298	.169	.054	.291	.166	.053	.278	.159	.051	.265	.153	.049	.254	.147	.048	
2.0	.283	.155	.048	.277	.152	.047	.265	.147	.046	.255	.143	.045	.245	.138	.044	
3.0	.263	.140	.042	.258	.138	.042	.248	.134	.041	.238	.131	.040	.229	.127	.039	
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.036	.222	.119	.036	.214	.116	.035	
5.0	.226	.115	.033	.222	.114	.033	.214	.111	.033	.206	.109	.032	.199	.106	.032	
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.193	.100	.029	.186	.098	.029	
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027	
8.0	.183	.090	.025	.180	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.172	.083	.023	.169	.083	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.159	.077	.021	.155	.076	.021	.150	.075	.021	.146	.074	.021	

r CC	80%			70%			50%			30%			10%			0
r W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	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	.154	.134	.116	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.147	.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	.156	.101	.059	.133	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.084	.050	.024	.049	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.116	.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	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.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:2019-12-07

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:SM7R15930UNVW			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	16.4	17.9	16.7	18.1	18.3	16.7	18.2	17.0	18.4	18.6	
	3H	17.7	19.1	18.0	19.3	19.5	18.1	19.5	18.4	19.7	20.0
	4H	18.1	19.4	18.4	19.7	20.0	18.6	20.0	19.0	20.2	20.5
	6H	18.4	19.6	18.7	19.9	20.2	19.0	20.2	19.3	20.5	20.8
	8H	18.4	19.6	18.7	19.9	20.1	19.1	20.3	19.4	20.6	20.9
	12H	18.3	19.5	18.7	19.8	20.1	19.1	20.3	19.5	20.6	20.9
4H	2H	17.0	18.3	17.3	18.6	18.8	17.3	18.6	17.6	18.8	19.1
	3H	18.5	19.6	18.8	19.9	20.2	18.8	20.0	19.2	20.3	20.6
	4H	19.0	20.1	19.4	20.4	20.7	19.5	20.5	19.8	20.8	21.2
	6H	19.3	20.3	19.7	20.6	21.0	19.9	20.8	20.3	21.2	21.6
	8H	19.4	20.2	19.8	20.6	21.0	20.0	20.9	20.5	21.3	21.7
	12H	19.4	20.2	19.8	20.5	20.9	20.1	20.9	20.5	21.3	21.7
8H	4H	19.2	20.1	19.7	20.5	20.9	19.6	20.5	20.1	20.9	21.3
	6H	19.7	20.4	20.1	20.8	21.2	20.2	20.9	20.7	21.3	21.8
	8H	19.8	20.4	20.2	20.8	21.3	20.4	21.0	20.9	21.5	21.9
	12H	19.8	20.3	20.2	20.8	21.2	20.5	21.1	21.0	21.5	22.0
12H	4H	19.2	20.0	19.7	20.4	20.8	19.6	20.4	20.1	20.8	21.2
	6H	19.7	20.3	20.2	20.8	21.2	20.2	20.9	20.7	21.3	21.7
	8H	19.8	20.3	20.3	20.8	21.3	20.4	21.0	20.9	21.4	21.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.3					

CIE Pub.117, 1345 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.0)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
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 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-12-07

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:SM7R15930UNVW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

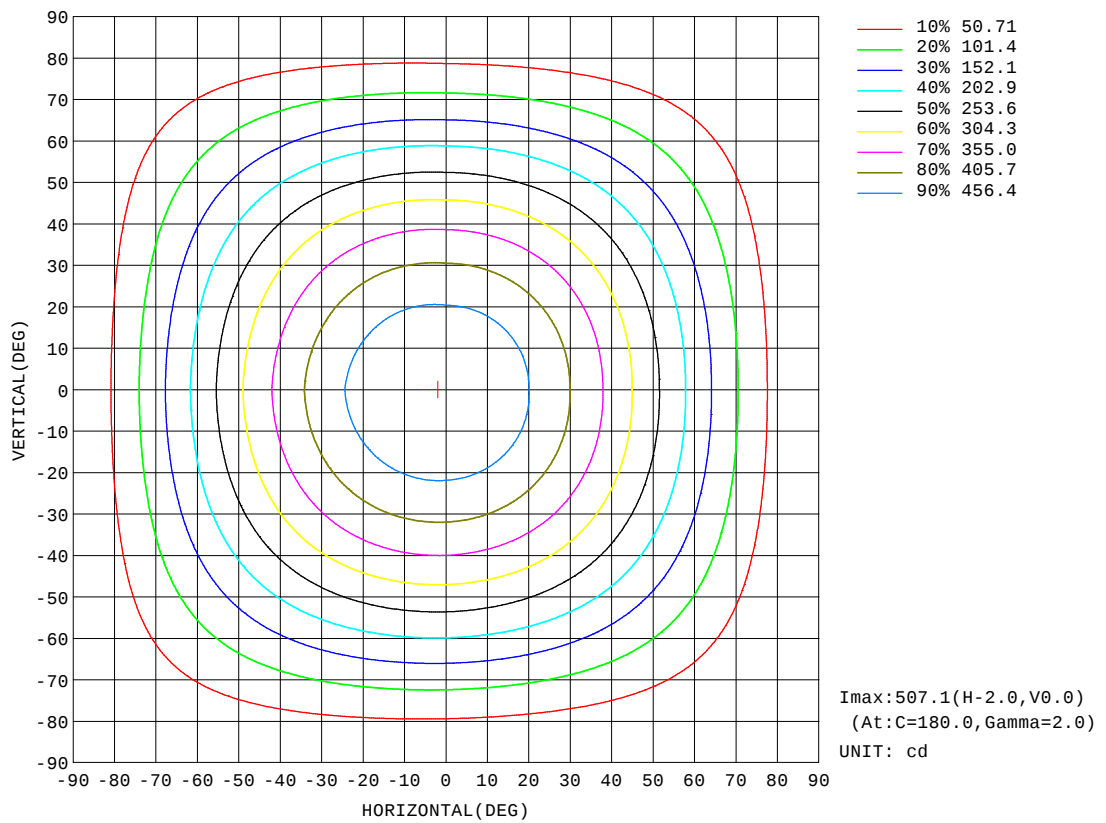
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	47	40	58	47	40	57	46	40	34
0.80	69	57	50	68	57	50	66	56	50	43
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	73	67	80	72	66	59
1.50	89	80	73	87	79	72	84	77	71	64
2.00	96	88	81	94	86	81	91	84	79	71
2.50	100	92	86	98	91	85	94	88	84	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	104	100	95	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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Operators:DAMIN
Test Date:2019-12-07

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:3.200m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME:	TYPE:SM7R15930UNVW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.:21cm*16cm	Shielding Angle:

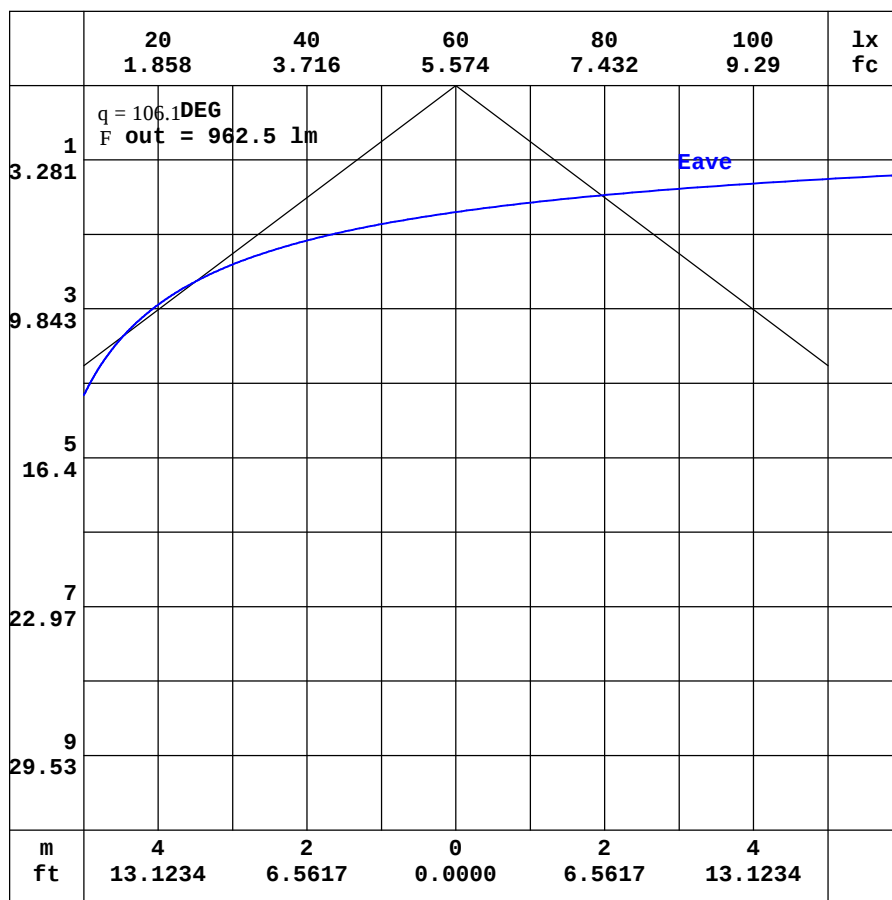


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-12-07

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 3.200m [K=1.0000]
Remarks:

AAI CURVES

NAME:	TYPE: SM7R15930UNVW	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: RAB LIGHTING INC.	SUR.: 21cm*16cm	Shielding Angle:

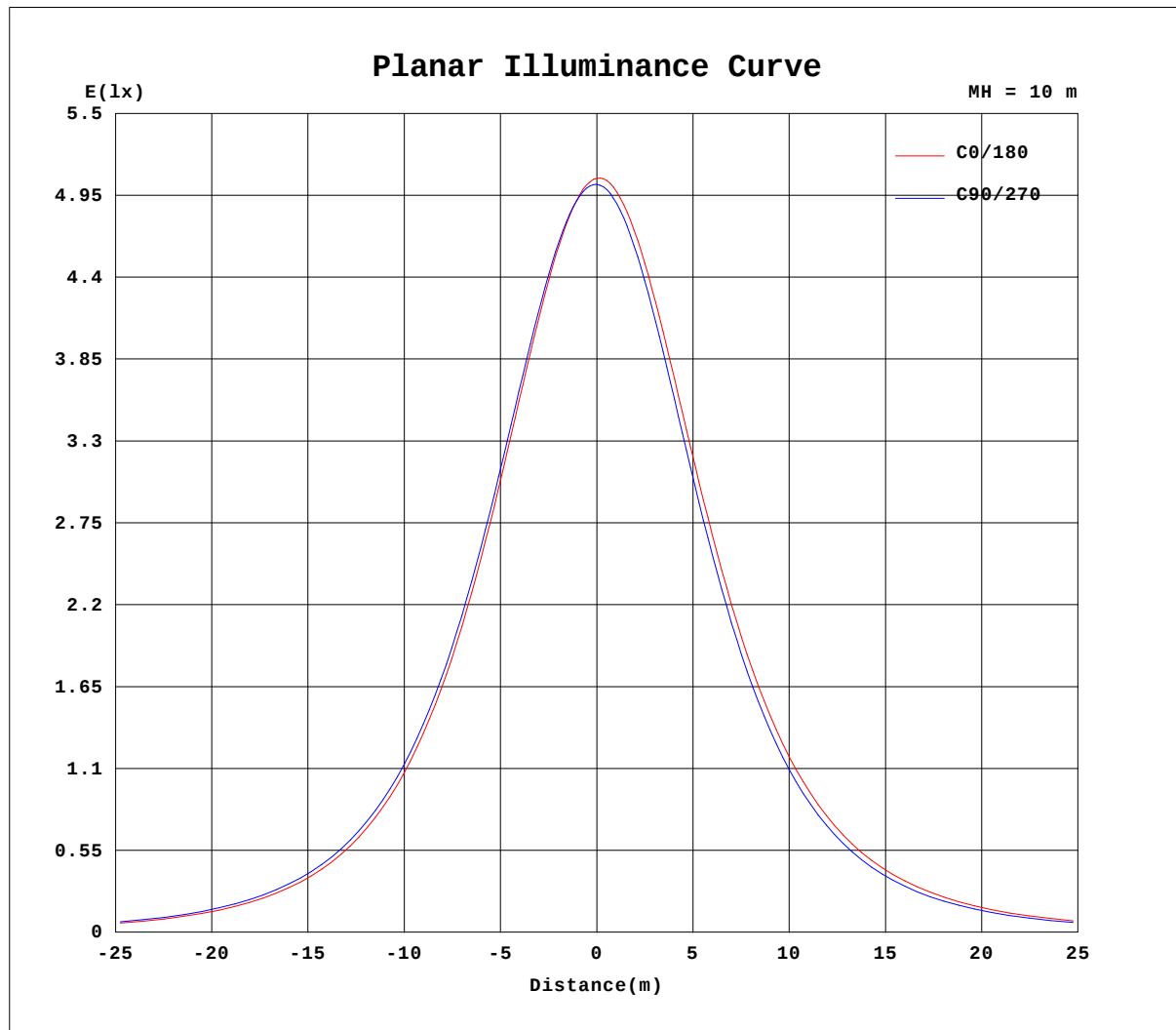


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-12-07

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 3.200m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
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Operators: DAMIN
Test Date: 2019-12-07

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 3.200m [K=1.0000]
Remarks:

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Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:3.200m [K=1.0000]
Remarks:

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