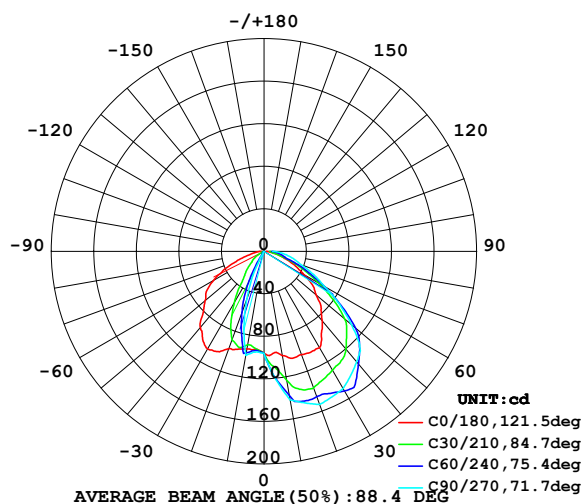


LUMINAIRE PHOTOMETRIC TEST REPORT

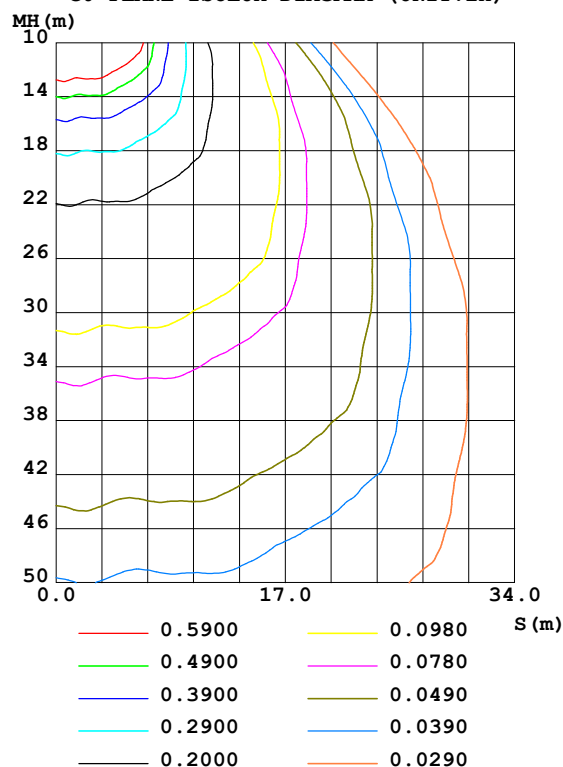
NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	REL7LED EM mode	I _{max} (cd)	156.1	S/MH (C0/180)	1.53
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	0.62
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	275.42	η UP, DN (C0-180)	0.0, 78.4
NOMINAL FLUX (lm)	275.422	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 21.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.15

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYL
Test Date: 2019-01-23

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity: 65.0%
Test Distance: 13.828m [K=1.0000]
Remarks: 放电

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	96.48	114.6	119.4	110.5	92.31	92.54	95.10	94.97	0- 5	2.401	2.401	0.87,0.87
10	99.58	130.9	141.7	126.1	93.27	91.31	99.29	96.63	5- 10	7.636	10.04	3.64,3.64
15	104.1	143.3	147.5	135.5	95.39	90.64	73.21	92.19	10- 15	13.25	23.29	8.45,8.45
20	103.4	142.1	153.3	138.8	97.57	72.10	47.14	69.24	15- 20	17.75	41.04	14.9,14.9
25	104.6	140.9	151.1	139.2	104.1	54.10	24.76	45.04	20- 25	21.12	62.16	22.6,22.6
30	104.8	138.4	148.9	137.1	106.1	35.77	2.383	26.29	25- 30	23.35	85.51	31,31
35	94.21	136.1	142.3	135.9	100.7	18.34	1.773	14.90	30- 35	24.81	110.3	40.1,40.1
40	85.20	132.3	135.7	131.9	93.27	6.343	1.163	6.253	35- 40	25.77	136.1	49.4,49.4
45	76.19	117.9	127.5	117.5	81.06	6.147	0.6073	5.455	40- 45	26.10	162.2	58.9,58.9
50	64.24	99.97	107.7	102.0	72.42	4.405	0.4910	4.032	45- 50	25.37	187.6	68.1,68.1
55	55.93	81.41	86.36	85.78	66.61	1.474	0.4297	1.560	50- 55	23.05	210.6	76.5,76.5
60	43.32	60.90	65.04	65.06	54.95	1.083	0.3683	1.100	55- 60	19.53	230.2	83.6,83.6
65	32.85	41.84	50.97	45.67	42.38	0.9297	0.3304	0.8624	60- 65	15.36	245.5	89.1,89.1
70	22.57	26.41	36.90	29.62	28.14	0.7552	0.2925	0.6858	65- 70	11.18	256.7	93.2,93.2
75	14.62	15.18	29.71	17.41	17.06	0.5243	0.2789	0.5859	70- 75	7.537	264.2	95.9,95.9
80	7.442	11.36	22.52	12.99	10.19	0.4377	0.2654	0.4712	75- 80	5.182	269.4	97.8,97.8
85	3.879	8.770	15.33	9.573	5.712	0.3622	0.2518	0.3303	80- 85	3.612	273.0	99.1,99.1
90	2.307	6.402	8.135	6.130	2.356	0.2709	0.2383	0.1625	85- 90	2.404	275.4	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

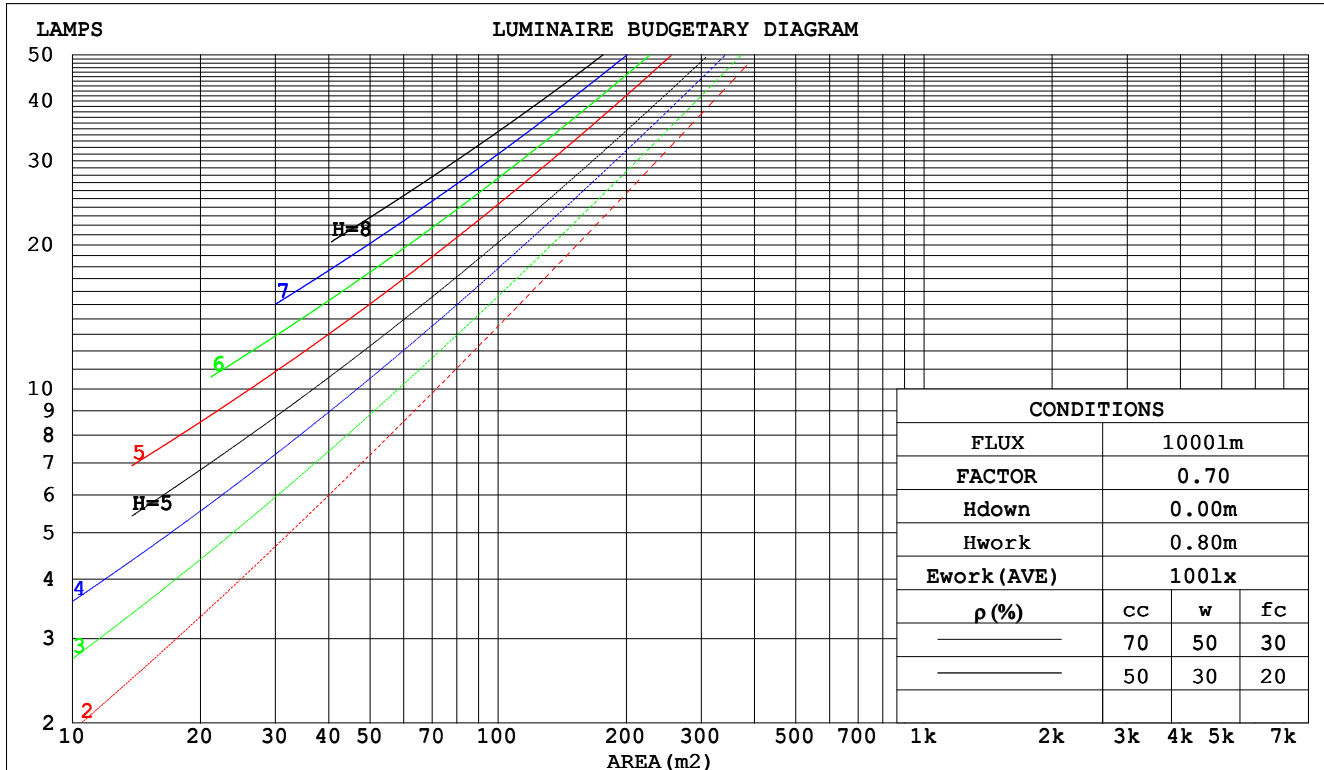
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYL
 Test Date:2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:13.828m [K=1.0000]
 Remarks: 放电

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.92	.94	.92	.90	.91	.89	.87	.85
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.78	.84	.79	.76	.81	.77	.74	.72
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.74	.69	.65	.72	.67	.64	.62
4.0	.73	.64	.58	.71	.64	.58	.69	.62	.57	.67	.61	.56	.65	.59	.55	.53
5.0	.65	.57	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.47	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.41	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.33
9.0	.45	.37	.32	.45	.37	.32	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.29	.38	.33	.28	.27



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYL
 Test Date:2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:13.828m [K=1.0000]
 Remarks: 放电

WEC AND CCEC

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.292	.166	.053	.285	.162	.052	.272	.156	.050	.260	.150	.048	.248	.144	.046		
2.0	.274	.150	.046	.268	.148	.046	.257	.143	.044	.246	.138	.043	.236	.134	.042		
3.0	.255	.136	.041	.250	.134	.040	.240	.130	.039	.230	.126	.039	.222	.123	.038		
4.0	.237	.123	.036	.232	.122	.036	.223	.118	.035	.215	.115	.035	.207	.113	.034		
5.0	.220	.112	.033	.216	.111	.032	.208	.108	.032	.201	.106	.031	.194	.104	.031		
6.0	.205	.103	.029	.202	.102	.029	.194	.100	.029	.188	.098	.029	.182	.096	.028		
7.0	.192	.095	.027	.189	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026		
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024		
9.0	.169	.082	.023	.166	.081	.023	.161	.080	.023	.156	.078	.022	.152	.077	.022		
10.0	.159	.076	.021	.157	.076	.021	.152	.075	.021	.148	.073	.021	.144	.072	.021		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.087	.100	.079	.060	.058	.046	.035	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYL
 Test Date:2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:13.828m [K=1.0000]
 Remarks: 放电

UGR(Unified Glare Rating) Table

NAME: REL7LED EM mode						TYPE:			WEIGHT:		
SPEC.:						DIM.:			SERIAL No.:2019012302		
						SUR.:0.013			PROTECTION 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						21.9	23.4	22.2	23.5	23.8	23.2
3H						22.7	24.0	23.0	24.2	24.5	24.3
4H						22.9	24.2	23.2	24.4	24.7	24.8
6H						23.0	24.2	23.3	24.5	24.7	25.4
8H						23.0	24.2	23.4	24.5	24.7	25.7
12H						23.0	24.1	23.4	24.4	24.7	26.1
4H 2H						22.4	23.7	22.7	23.9	24.2	23.5
3H						23.3	24.4	23.7	24.7	25.0	24.6
4H						23.6	24.6	24.0	25.0	25.3	25.3
6H						23.8	24.7	24.2	25.1	25.4	26.1
8H						23.9	24.7	24.3	25.1	25.5	26.6
12H						23.9	24.7	24.4	25.1	25.5	27.1
8H 4H						23.7	24.6	24.2	24.9	25.3	25.3
6H						24.0	24.7	24.5	25.1	25.6	26.3
8H						24.2	24.8	24.6	25.2	25.7	26.9
12H						24.3	24.9	24.8	25.3	25.8	27.6
12H 4H						23.8	24.5	24.2	24.9	25.3	25.3
6H						24.1	24.8	24.6	25.2	25.6	26.3
8H						24.3	24.9	24.8	25.3	25.8	27.0
Variations with the observer position at spacings:											
S = 1.0H						+ 0.5 / - 0.5			+ 0.2 / - 0.2		
1.5H						+ 0.5 / - 1.1			+ 0.2 / - 0.5		
2.0H						+ 0.6 / - 1.3			+ 0.4 / - 0.4		

CIE Pub.117 Corrected 275.4 lm Total Lamp Luminous Flux. (8log(F/F0) = -4.5)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYL
 Test Date:2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:13.828m [K=1.0000]
 Remarks: 放电

UTILIZATION FACTORS TABLE

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION 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) x RCR = 5									
k = 0.60	60	49	42	59	49	42	58	48	42	36
0.80	70	59	52	69	59	52	68	58	52	45
1.00	79	68	61	78	68	61	75	69	61	54
1.25	86	76	69	84	75	69	82	74	68	61
1.50	90	81	75	89	80	74	86	79	73	66
2.00	97	89	83	95	88	82	92	86	81	73
2.50	100	93	88	98	92	87	95	89	85	77
3.00	103	97	92	101	96	91	97	93	89	80
4.00	107	102	97	105	100	96	101	97	93	85
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										
SHR _{NO} M = 1.25 SHR _{NO} M = 1.25										

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYL
 Test Date: 2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.287
 Humidity: 65.0%
 Test Distance: 13.828m [K=1.0000]
 Remarks: 放电

ISOCANDELA DIAGRAM

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

Conical surface Flux(90deg):

162.2 lm

%lum = 58.9%

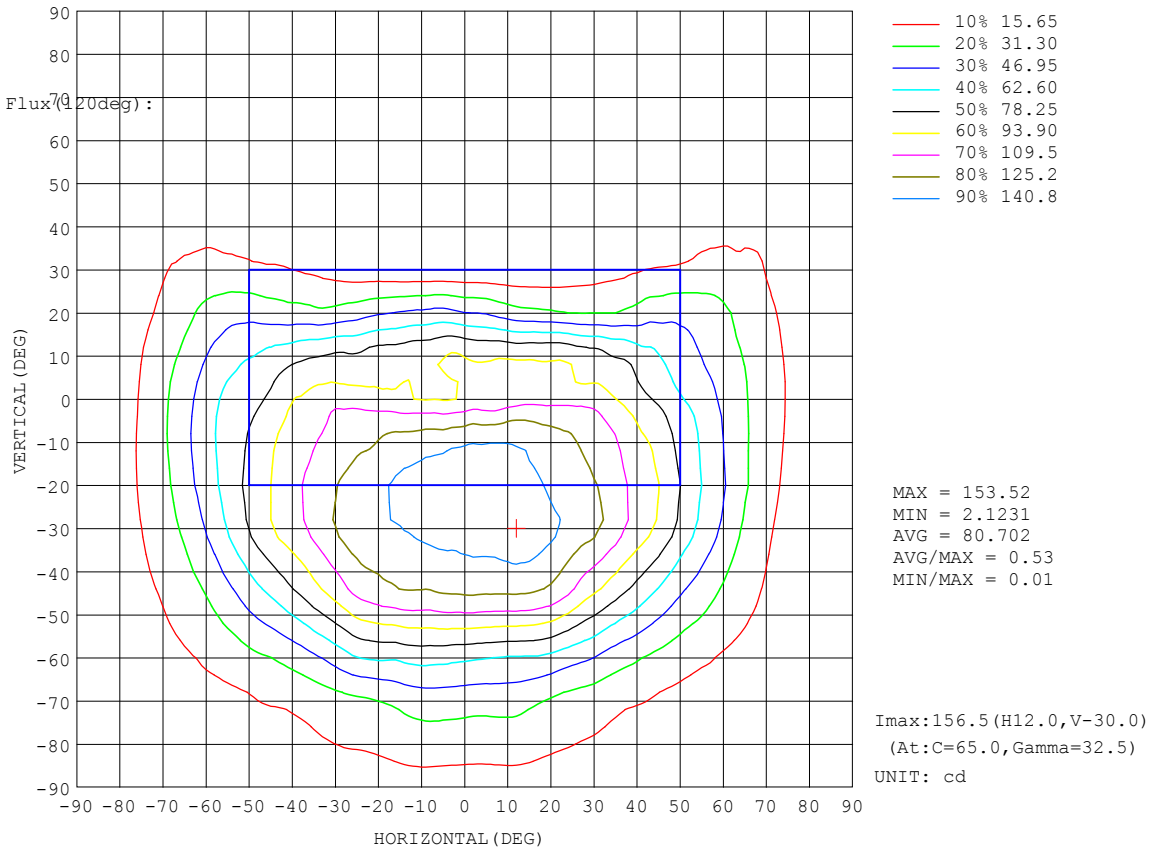
%lamp = 58.9%

Conical surface Flux(20deg):

230.15 lm

%lum = 83.6%

%lamp = 83.6%

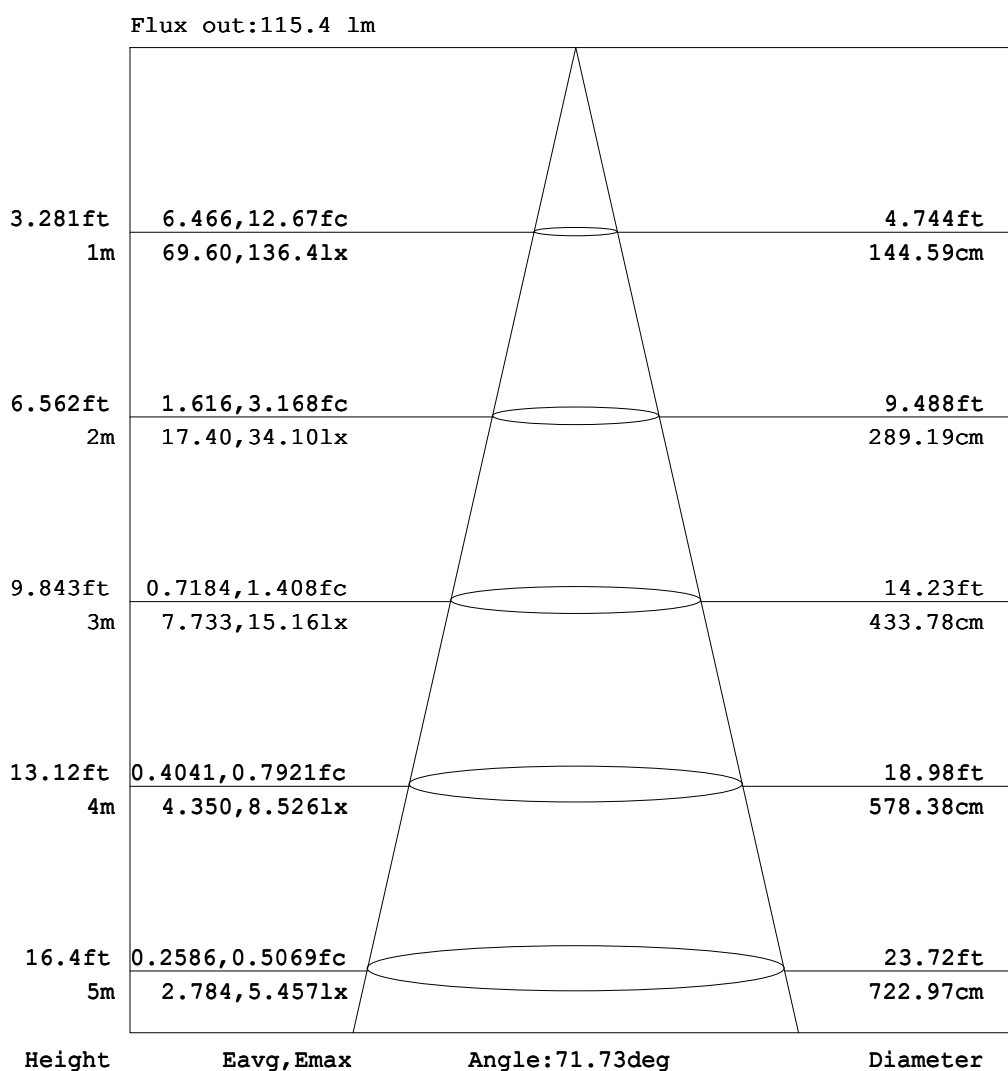


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYL
Test Date:2019-01-23

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

AAI Figure

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:



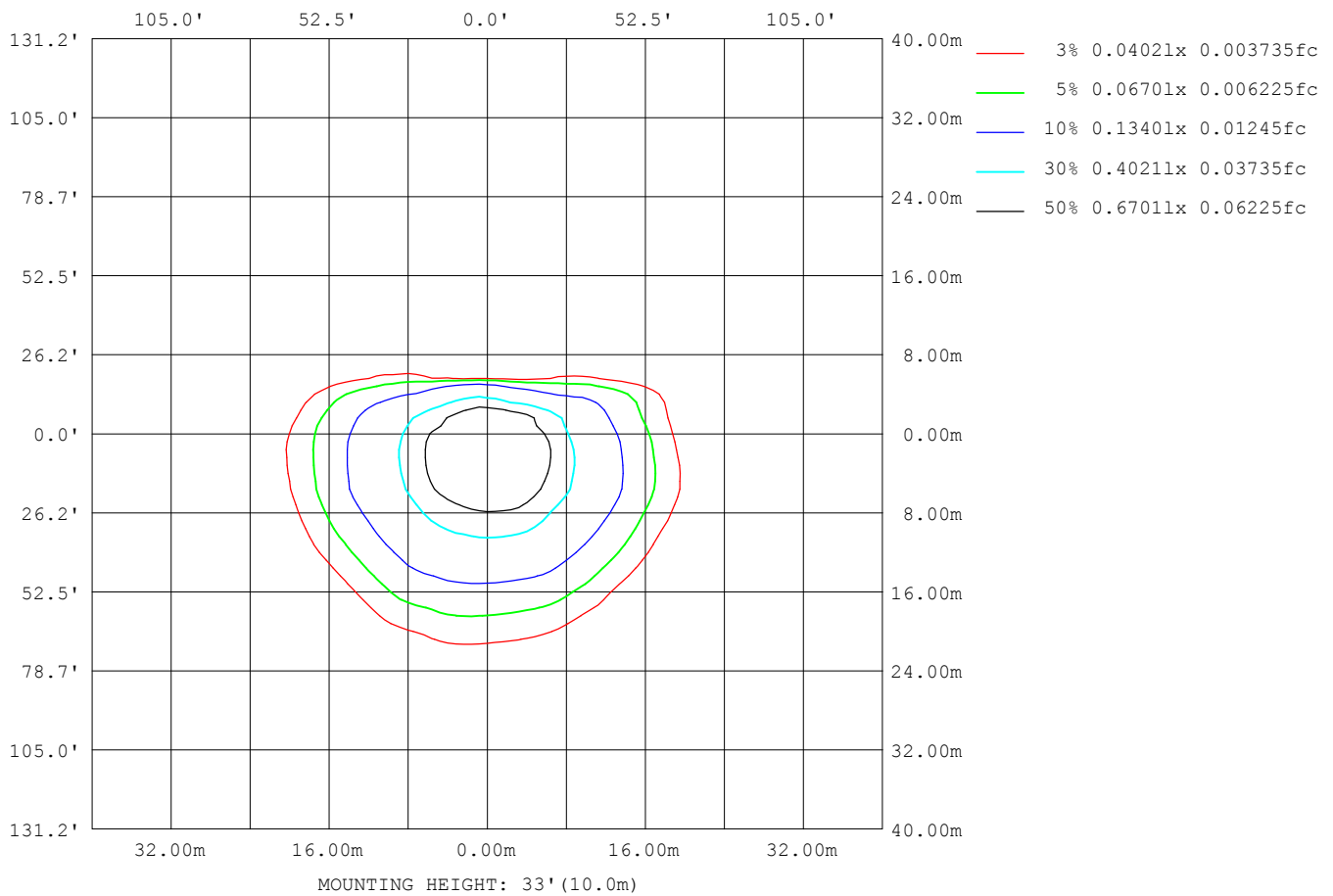
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYL
Test Date: 2019-01-23

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity: 65.0%
Test Distance: 13.828m [K=1.0000]
Remarks: 放电

ISOLUX DIAGRAM

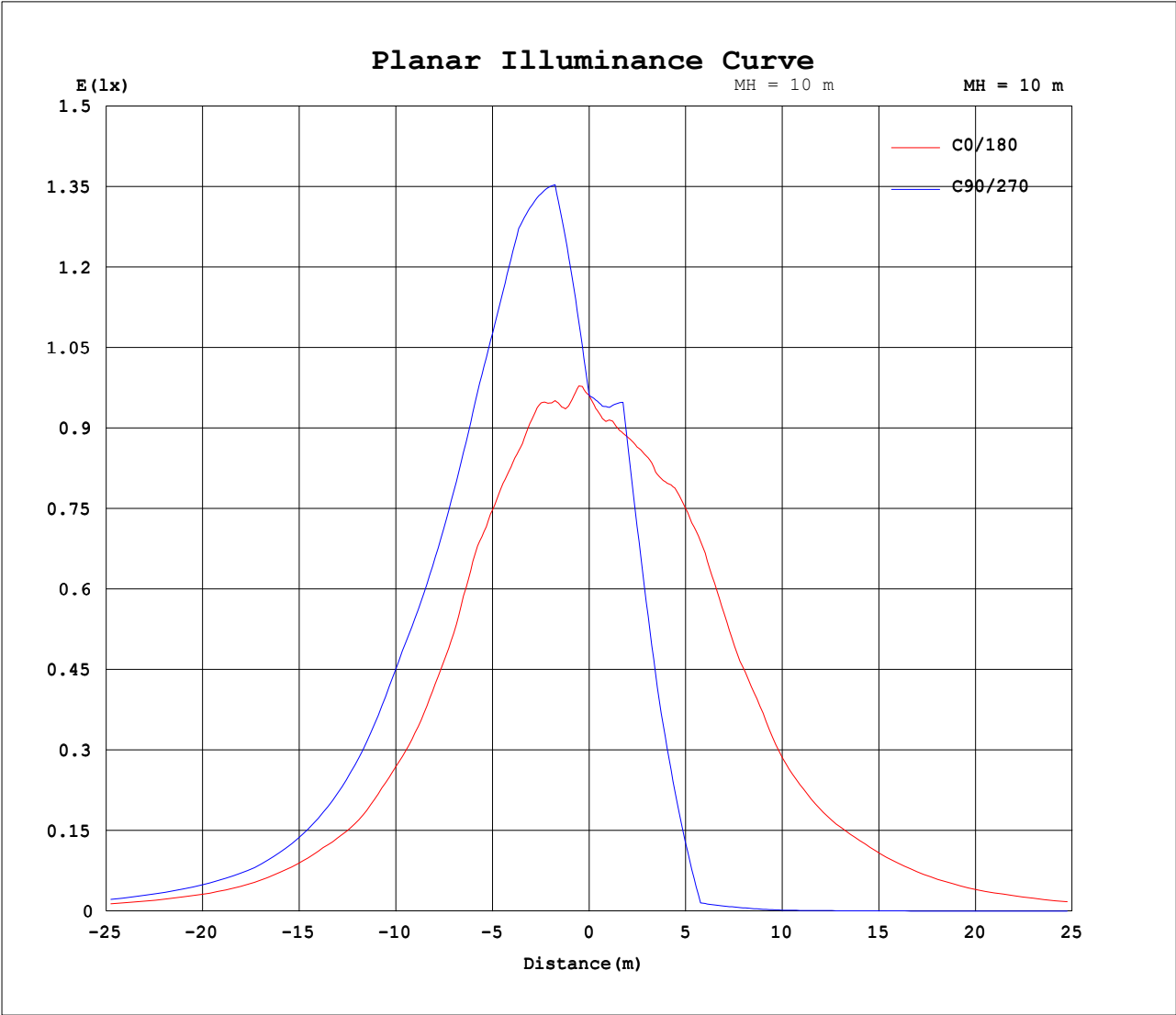
NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYL
Test Date:2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYL
Test Date:2019-01-23

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC. :	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYL
Test Date: 2019-01-23

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

```

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC. :	DIM.:	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

Table--2

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYL
Test Date: 2019-01-23

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

```

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC. :	DIM. :	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

Table--3

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYL
Test Date: 2019-01-23

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

```

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: REL7LED EM mode	TYPE:	WEIGHT:
SPEC. :	DIM. :	SERIAL No.:2019012302
	SUR.:0.013	PROTECTION ANGLE:

Table--4

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYL
Test Date:2019-01-23

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.828m [K=1.0000]
Remarks: 放电

```